

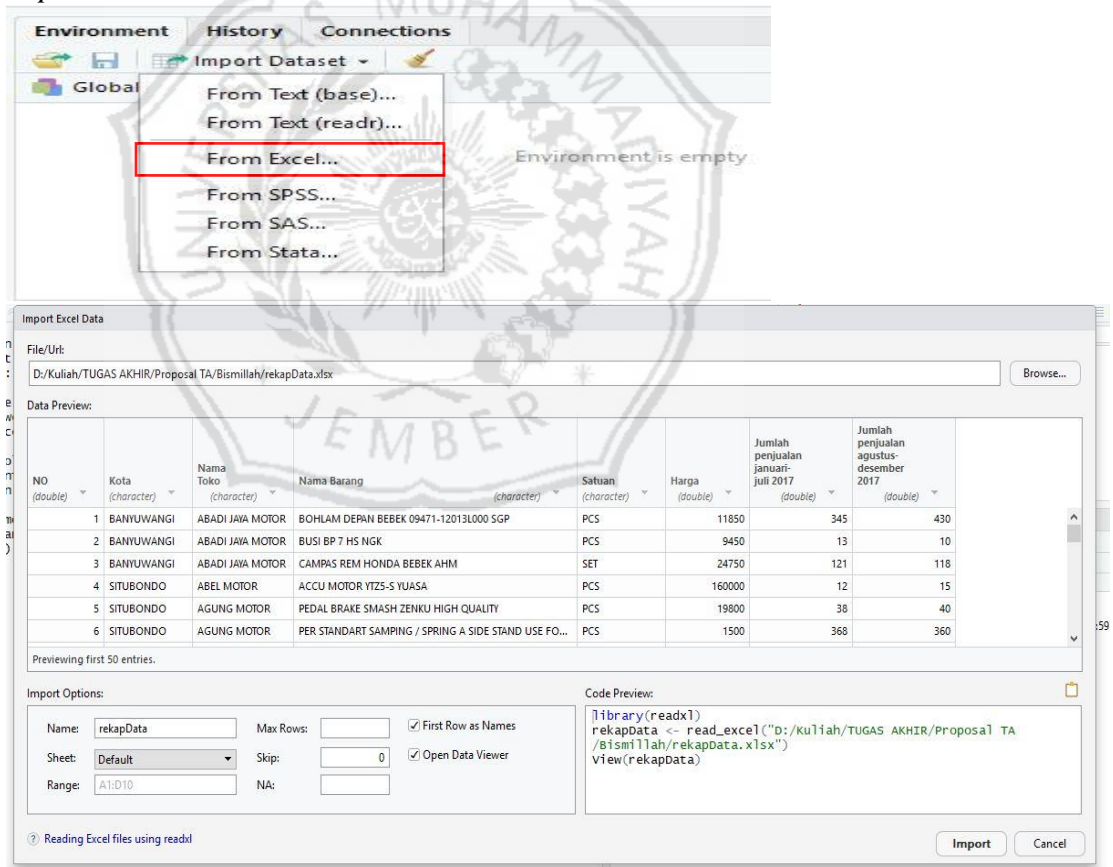
## LAMPIRAN

### Lampiran 1. penerapan RStudio pada *Fuzzy C-Means*

#### 1. Install package RStudio

```
1 install.packages("ppclust")
2 install.packages("factoextra")
3 install.packages("cluster")
4 install.packages("psych")
5 install.packages("fclust")
6 install.packages("fpc")
7 install.packages("NbClust")
8 install.packages("mclust")
9 install.packages("e1071")
10 install.packages("dbscan")
```

#### 2. Import Dataset



The screenshot shows the RStudio interface. The 'Environment' pane is empty. The 'History' pane shows the 'Import Dataset' menu. The 'Connections' pane is empty. The 'Import Dataset' menu is open, and 'From Excel...' is highlighted. The 'Import Excel Data' dialog box is open, showing the file path 'D:/Kuliah/TUGAS AKHIR/Proposal TA/Bismillah/rekapData.xlsx'. The 'Data Preview' section shows a table with the following data:

NO	Kota	Nama Toko	Nama Barang	Satuan	Harga	Jumlah penjualan januari-juli 2017	Jumlah penjualan agustus-desember 2017
1	BANYUWANGI	ABADI JAYA MOTOR	BOHLAM DEPAN BEBEK 09471-12013L000 SGP	PCS	11850	345	430
2	BANYUWANGI	ABADI JAYA MOTOR	BUSI BP 7 HS NGK	PCS	9450	13	10
3	BANYUWANGI	ABADI JAYA MOTOR	CAMPAS REM HONDA BEBEK AHM	SET	24750	121	118
4	SITUBONDO	ABEL MOTOR	ACCU MOTOR YTZ5-S YUASA	PCS	160000	12	15
5	SITUBONDO	AGUNG MOTOR	PEDAL BRAKE SMASH ZENKU HIGH QUALITY	PCS	19800	38	40
6	SITUBONDO	AGUNG MOTOR	PER STANDART SAMPING / SPRING A SIDE STAND USE FO...	PCS	1500	368	360

The 'Import Options' section shows the following settings:

- Name: rekapData
- Max Rows: (empty)
- First Row as Names:
- Sheet: Default
- Skip: 0
- Open Data Viewer:
- Range: A1:D10
- NA: (empty)

The 'Code Preview' section shows the following R code:

```
library(readxl)
rekapdata <- read_excel("D:/Kuliah/TUGAS AKHIR/Proposal TA
/Bismillah/rekapData.xlsx")
view(rekapdata)
```

At the bottom of the dialog, there is a button 'Import' and a button 'Cancel'.

### 3. *Preprocessing Data*

```
#preprocessing data
dataSTOK = STOK_GLOBAL
dataSTOK$`NAMA BARANG` <- NULL
dataSTOK$`ID BARANG` <- NULL
```

### 4. *Load package*

```
require(ppclust)
require(factoextra)
require(cluster)
require(psych)
require(fclust)
require(fpc)
require(NbClust)
require(mclust)
require(e1071)
require(dbscan)
require(ggplot2)
options(max.print=1000)
```

### 5. Implementasi *Metode Elbow*

Pada tahap ini peneliti mencari jumlah *Cluster* terbaik untuk data yang telah dipreprocessing sebelumnya dengan mengetikkan perintah sebagai berikut pada

```
#perintah metode elbow
set.seed(543)
k.max <- 5
data <- dataSTOK
sse <- sapply(1:k.max,
              function(k){kmeans(data, k, nstart = 1, iter.max = 100)$tot.withinss})
sse
plot(1:k.max, sse,
     type = "b", pch=19, frame=FALSE,
     xlab="Number of clusters k",
     ylab="Sum of Square Error")
```

set.seed (543) merupakan banyaknya jumlah data

k.max <- 5 yaitu kluster maksimal yang ditentukan oleh peneliti sebanyak 5

nstart = 1 merupakan nilai awal start atau dimulai dari data ke 1

iter.max = 100 merupakan maksimal iterasi sebanyak 100 kali

### 6. Perintah menampilkan jumlah iterasi

```
Console Terminal x
~/Renaldy/ ↵
>
> res.fcm$iter
```

### 7. Perintah fungsi *fuzzy cmean*

```
Console Terminal x
~/Renaldy96/ ↗
> res.dataSTOK4 <- fcm(dataSTOK, centers = 4)
> as.data.frame(res.dataSTOK4$u)[1:10,]
      cluster 1  cluster 2  cluster 3  cluster 4
1  3.397522e-03  8.170902e-03  9.088595e-01  7.957208e-02
2  3.040709e-03  4.024856e-03  6.790153e-01  3.139191e-01
3  1.194263e-02  4.192357e-02  7.697695e-01  1.763643e-01
4  6.413702e-03  1.781568e-02  8.526690e-01  1.231016e-01
5  3.516498e-02  1.526850e-02  1.841152e-01  7.654514e-01
6  5.017152e-05  8.587140e-05  9.976033e-01  2.260644e-03
7  3.221759e-03  3.716918e-03  3.084013e-01  6.846600e-01
8  1.334176e-05  2.400291e-05  9.994286e-01  5.340699e-04
9  1.596268e-04  2.663366e-04  9.919024e-01  7.671661e-03
10 5.686113e-06  9.999419e-01  3.105795e-05  2.131123e-05
```

8. Perintah fungsi mencari frekuensi pusat *Cluster*

```
Console Terminal x
~/Renaldy/ ↗
>
>
>
> res.fcm$v
```

9. Perintah mencari fungsi objektif

```
Console Terminal x
~/Renaldy/ ↗
> res.fcm$d
```

10. Perintah mencari derajat keanggotaan

```
Console Terminal x
~/Renaldy/ ↗
> res.fcm$u
```

## Lampiran 2. Hasil clustering

### Cluster 1

	NO	nama barang	id barang	stk	qty	laba
C1	1	ACCU GTZ-5S GS	FC2ACGTZ5SGS	5	26	56184
	2	ACCU MOTOR GTZ5S KHARISMA 31500-KPH-881 AHM	FC2ACCU079AH	0	20	136800
	3	ACCU MOTOR YTZ5-S YUASA	FC2ACYTZ5SYS	51	58	172654
	4	ACCU YB5L-B[BA] YUASA	FC2ACCU5BAYS	54	54	101232
	5	BALL RACE GL-PRO W/BLISTER ZENKU	FB2COMS056ZE	17	5	52750
	6	BALL RACE JUPITER W/BLISTER ZENKU	FB2COMS026ZE	3	5	36585
	7	BALL RACE MIO W/BLISTER ZENKU	FB2COMS031ZE	19	5	61030
	8	BD 225\250 X 17 22517-250- 17NR00 AHM	FX2BD22517AH	231	11	40419
	9	BD 225-250 X 17 / 70X90 - 17 IRC	FX2BD25017RC	36	3	2576
	10	BD 275 X 17 / 80X90 - 17 IRC	FX2BD27517RC	51	3	6352
	11	BD 80/90 X 14 IRC	FX2BD89014RC	8	2	2850
	12	BEARING KOYO 6300	FB4BE40000KO	8	2	12240
	13	BEARING ZENKU 6004-2RS	FB2BERG604ZE	563	32	108760
	14	BEARING ZENKU 6200-2RS	FB2BERG620ZE	601	40	73760
	15	BEARING ZENKU 6201-2RS	FB2BERG621ZE	99	0	0
	16	BEARING ZENKU 6203-2RS	FB2BERG623ZE	41	2	9300
	17	BEARING ZENKU 6300-2RS	FB2BERG630ZE	0	0	0
	18	BEARING ZENKU 6301-2RS	FB2BERG631ZE	188	1	6520
	19	BEARING W/BLISTER HTS 6201-2RS	FB2BERG621HT	53	2	13464
	20	BEARING W/BLISTER HTS 6203-2RS	FB2BERG623HT	85	10	53590
	21	BL 225 X 17 NR72 IRC	FX2BL25772RC	0	1	880
	22	BL 275 X 17 NR72 IRC	FX2BL75772RC	9	1	4660

23	BL 70/90 X 17 IRC	NR69	FX2BL79176RC	6	5	18875
24	BL 70/90X17 IRC	NR73	FX2BLNR073RC	0	1	3894
25	BL 80/90 X 14 IRC	NR76	FX2BL81476RC	1	5	17705
26	BL 80/90-17 IRC	NR82	FX2BL80N82RC	2	1	1800
27	BL 80/90-17 FT306 901 AHM	42711-KWC-	FX2BL80917AH	19	17	116410
28	BL FR SUPRA-X 125 AHM	44711-KTM-850	FX2BLFR082AH	26	27	18633
29	BL FR VARIO AHM	44711-KVB-930	FX2BLFR091AH	22	55	64335
30	BL RR SUPRA-X 125 AHM	42711-KTM-850	FX2BLRR082AH	79	170	153931
31	BOHLAM STOP ASTREA GB6-921 AHM	34906-	FX2BHST071AM	1655	56	33268
32	BOX ACCU C-70 RED 83500-087-710ZN	ZENKU	FE2BXAR051ZE	26	2	30860
33	BRAKE CABLE MIO TYPE 'A'	HTS	FB2KBRA031HT	23	5	47350
34	BRAKE CABLE SUPRA HTS TYPE 'A'		FB2KBRA068HT	23	15	115005
35	BRAKE DRUM FRONT REVO ZENKU		FB2TRBD090ZE	2	0	0
36	BRAKE DRUM REAR SILVER PART STATION	KHARISMA	FE2TRBS079PS	3	2	0
37	BRAKE DRUM REAR SILVER SHOGUN/SMASH STATION	PART	FE2TRBS115PS	10	2	27144
38	BRAKE DRUM REAR SILVER HTS	SUPRA	FE2TRBS068HT	5	2	83396
39	BRAKE PAD FORCE-1/ALFA W/BLISTER HTS (NON ASBESTOS)		FE2KRPS005HT	131	5	23260
40	BRAKE PAD REAR MEGA PRO NEW W/BLISTER HTS (NON ASBESTOS)		FE2KRPSR93HT	56	0	0
41	BRAKE PAD SUPRA W/BLISTER HTS (NON ASBESTOS)		FE2KRPS068HT	387	17	89250
42	BRAKE ROD ALFA/FORCE-1 ZENKU	TYPE 'A'	FB2BROD003ZE	24	15	47100
43	BRAKE ROD GL-PRO ZENKU	TYPE 'A'	FB2BROD056ZE	6	5	30700
44	BRAKE ROD GRAND ZENKU	TYPE 'A'	FB2BROD054ZE	15	25	91250

45	BRAKE ROD JUPITER-MX ZENKU	TYPE 'A'	FB2BROD300ZE	10	20	49600
46	BRAKE ROD JUPITER-Z ZENKU	TYPE 'A'	FB2BROD028ZE	5	5	23350
47	BRAKE ROD REVO ZENKU	TYPE 'A'	FB2BROD090ZE	51	0	0
48	BRAKE ROD SMASH ZENKU	TYPE 'A'	FB2BROD121ZE	5	5	15545
49	BRAKE ROD SUPRA ZENKU	TYPE 'A'	FB2BROD068ZE	4	5	15730
50	BRAKE ROD SUPRA FIT NEW 'A' ZENKU	TYPE	FB2BROD087ZE	24	0	0
51	BRAKE ROD VEGA-R ZENKU	TYPE 'A'	FB2BROD027ZE	1	10	27410
52	BRAKE SHOES SUZUKI HTS (NON ASBESTOS)	W/BLISTER	FE2KRSPN00HT	60	18	72886
53	BRAKE SHOES THUNDER PART STATION (NON ASBESTOS)	W/BLISTER	FE2KRWBN01PS	9	3	28800
54	BRAKE SHOES VEGA-ZR HTS (NON ASBESTOS)	W/BLISTER	FE2KRWBN10HT	86	16	112157
55	BUSI B 7 HS	NGK	FABBU13000NG	8	1	850
56	BUSI BP 7 HS	NGK	FABBU31000NG	180	110	11550
57	BUSI BPM 6 A	NGK	FABBU40000NG	110	10	1750
58	BUSI C 6 HS	NGK	FABBU41000NG	101	10	1000
59	BUSI C 7 HS	NGK	FABBU42000NG	444	178	56399
60	BUSI CPR 6 EA-9	NGK	FABBUSI073NG	530	540	279640
61	BUSI CPR 9 EA-9 YL NGK		FABBUSI12NGK	31	11	17500
62	BUSI CR 6 HS	NGK	FABBUSICR6HS	70	20	4580
63	BUSI D 6 HS	NGK	FABBU45000NG	844	30	13050
64	BUSI D 8 EA	NGK	FABBU47000NG	243	30	13800
65	BUSI MOBIL BKR 6 E-11 NGK		FABBUSI089NG	316	12	26750
66	BUSI MOBIL BKR 6 EGP NGK		FABBUSI082NG	72	4	19332
67	BUSI MOBIL BP 5 ES	NGK	FABBUSI030NG	362	14	10956
68	BUSI MOBIL BP 7 ES	NGK	FABBUSI056NG	145	31	28193
69	BUSI U22FS-U 98056-57723	AHM	FX2BUSI56AHM	0	700	461800
70	CABLE PTO 4 M SAS/SAIWA		FB4CPTO040SA	4	1	76790
71	CAM SHAFT MIO ZENKU		FB2NOAA031ZE	0	2	55830

72	CAMPAS DISC PAD DEPAN BEAT,SPACY,VARIO CBS 06455-KVB- T01 AHM	FX2CMPASDISC	148	17	28420
73	CAMPAS REM BELAKANG GL-PRO 43120-362-001 AHM	FX2CRBK056AH	15	35	5775
74	CAMPAS REM BLK (NABS) SZK 54410- 35450L000 SGL	FX2CMPR131SG	10	1	2999
75	CAMPAS REM DISC PAD BLK JUPITER- MX NEW 50C-W0046-00 YAMAHA GENUINE	FX2DPMXNEWED	4	1	4440
76	CAMPAS REM HONDA BEBEK 45120-001-011 AHM	FX2CREM099AH	232	206	129989
77	CAMPAS REM KHARISMA 43125- KPH-903 AHM	FX2CREM079AH	22	140	41180
78	CAMPAS REM MIO 5MX-F530K- 00 YAMAHA GENUINE	FX2CREM033YM	49	50	33900
79	CAMPAS REM SPACY 43130-KZL-930 AHM	FX2CREMKZRAH	69	155	72540
80	CAMPAS REM VEGA ZR NEW 5D9- F530K-00 YAMAHA GENUINE	FX2CREM048YM	11	7	12383
81	CAP MAGNET HONDA W/BLISTER HTS 90087-GN5-830	FE2TTMG000HT	57	24	69840
82	CAP MAGNET SHOGUN W/BLISTER HTS 09259-26011	FE2TTMG115HT	0	12	58920
83	CARBURATOR ASSY JUPITER ALM RUILI	FB2CARA026RU	0	1	28199
84	CARBURATOR ASSY RX-K ZENKU	FB2CARA200ZE	6	3	101790
85	CARBURATOR REPAIRKIT GRAND ZENKU	FB2REKA054ZE	65	5	61504
86	CARBURATOR REPAIRKIT MIO ZENKU	FB2REKA031ZE	56	12	99846
87	CARBURATOR REPAIRKIT RX-K ZENKU	FB2REKA020ZE	9	5	40000
88	CARBURATOR REPAIRKIT SUPRA/SUPRA-X ZENKU	FB2REKA068ZE	5	10	57260
89	CDI BEAT W/BLISTER HTS	FB2CDIB039HT	9	1	81170
90	CHAIN ADJUSTER LH GRAND/SUPRA (LUBANG BESAR) PART STATION	FB2STRL054PS	37	12	10232
91	CHAIN ADJUSTER LH SMASH ZENKU HIGH QUALITY	FB2STRL121ZH	47	10	13600
92	CHAIN ADJUSTER REVO ABSOLUTE ZENKU HIGH QUALITY	FB2STRTO91ZH	40	0	0

93	CHAIN ADJUSTER RH GRAND/SUPRA (LUBANG KECIL) PART STATION	FB2STRR054PS	58	30	44370
94	CHAIN ADJUSTER VIXION ZENKU HIGH QUALITY	FB2STRT037ZH	5	2	10560
95	CHANGE GEAR FORCE-1 BGF/SAS	FB2PEPE005BG	26	7	45569
96	CHANGE GEAR GL PRO BGF/SAS	FB2PEPE056BG	5	5	37450
97	CHANGE GEAR GRAND W/PLASTIC HTS	FB2PEPE054HT	4	3	20910
98	CHANGE GEAR JUPITER-Z W/PLASTIC HTS	FB2PEPE028HT	20	5	66850
99	CHANGE GEAR KHARISMA/SUPRA-X 125 SPEED	FB2PEPE079BG	25	4	53440
100	CHANGE GEAR SHOGUN BGF/SAS	FB2PEPE115BG	51	7	88200
101	CHANGE GEAR SUPRA BGF/SAS	FB2PEPE068BG	24	9	76368
102	CHANGE GEAR VEGA R NEW W/PLASTIC HTS	FB2PEPE032HT	22	3	22140
103	CLUTCH CABLE GL-100,CG HTS TYPE 'A'	FB2KKPA055HT	22	3	18450
104	CLUTCH CABLE GL-PRO NEO TECH HTS TYPE A 22870-KEH-900	FB2KBKO074HY	80	5	32850
105	CLUTCH CABLE RX-K NEW HTS TYPE 'A'	FB2KKPA023HT	125	8	37740
106	CLUTCH CABLE SATRIA FU-150 HTS TYPE 'A'	FB2KKPA131HT	9	5	22750
107	CLUTCH CABLE TIGER HTS TYPE A 22870-KCJ-690	FB2KBKO059HY	27	5	29925
108	CLUTCH DISC JUPITER-MX HTS	FB2KAKO030HT	3	2	16496
109	CONDENSOR W/BLISTER L-300 PART STATION	FB4COND057PS	130	20	53960
110	COOLANT RADIATOR 1 LITER MOTOGARD	FB2RCOL001MG	41	8	35035
111	COVER BODY RH/LH SUPRA/SUPRA FIT ZENKU 64340/64330-KEV-880FMB	FE2CVBRL68ZE	8	2	61060
112	COVER FOOTREST (KARET FOOSTEP) SUPRA ZENKU	FE2KRFS0068Z	1	0	0
113	COVER FRONT FENDER FORK SUPRA PART STATION	FE2TUAS068PS	2	2	42408
114	COVER FRONT FENDER FORK SUPRA ZENKU	FE2TUAS068ZE	28	2	28500



115	COVER HEAD LAMP FRONT GRAND ZENKU	FE2COHF054ZE	59	6	93900
116	COVER HEAD LAMP FRONT VEGA 2003/JUPITER 2003 ZENKU	FE2COHF006ZE	4	2	31960
117	COVER HEAD LAMP REAR GRAND ZENKU	FE2COHR054ZE	7	3	46665
118	COVER HEAD LAMP REAR SUPRA ZENKU	FE2COHR068ZE	15	0	0
119	COVER MUFFLER BEAT ZENKU	FE2CMUF093ZE	4	2	15060
120	COVER MUFFLER MIO-M3 PART STATION	FE2CMUF032PS	5	3	33909
121	COVER MUFFLER MIO-M3 ZENKU	FE2CMUF032ZE	35	3	36120
122	COVER MUFFLER VARIO CBS 125 FI PART STATION	FE2CMUF094PS	6	7	63440
123	COVER MUFFLER VARIO CBS 125 FI ZENKU	FE2CMUF094ZE	51	7	80140
124	COVER MUFFLER VARIO CW PART STATION	FE2CMUF089PS	95	22	157332
125	COVER MUFFLER VARIO TECHNO CBS-110 PART STATION	FE2CMUF098PS	7	10	85475
126	DIAPHRAGM REPAIR KIT (VACUUM BOOSTER) MIO HTS	FB2DIAP031HT	3	1	20639
127	DIAPHRAGM REPAIR KIT (VACUUM BOOSTER) VARIO HTS	FB2DIAP089HT	1	5	92450
128	DISC PAD F-1 ZR W/BLISTER PART STATION (NO	FE2DSPN006PS	84	10	64140
129	DISC PAD FORCE-1 ZR ZENKU (NON ASBESTOS)	FE2DSPN060ZE	535	13	48140
130	DISC PAD JUPITER-MX ZENKU (NON ASBESTOS)	FE2DSPN030ZE	208	25	72540
131	DISC PAD JUPITER-MX W/BLISTER PART STATION (NON ASBE	FE2DSPN030PS	75	5	43400
132	DISC PAD MEGA PRO NEW ZENKU (NON ASBESTOS)	FE2DSPN083ZE	262	10	31130
133	DISC PAD REAR SUPRA X 125 W/BLISTER PART STATION (NON ASBESTOS)	FE2DSPN082PS	12	9	71340
134	DISC PAD REVO/BLADE W/BLISTER PART STATION (NON ASBES	FE2DSPN091PS	165	15	86300
135	DISC PAD RX-K ZENKU (NON ASBESTOS)	FE2DSPAN08ZE	59	5	33005
136	DISC PAD SUPRA W/BLISTER PART STATION (NON	FE2DSPN068PS	84	5	32305

137	DISC PAD VARIO CBS ZENKU (NON ASBESTOS)	FE2DSPN089ZE	258	14	71020
138	DISC PAD VARIO CBS W/BLISTER PART STATION (NON ASB)	FE2DSPN089PS	62	1	4420
139	DRIVE CHAIN KIT GRAND (36T- 14T/428-100) HTS	FB2DRCK054HT	34	0	0
140	DRIVE CHAIN KIT JUPITER-Z (36T- 14T/428-104) HTS	FB2DRCK028HT	14	2	71088
141	DRIVE CHAIN KIT REVO ABSOLUTE (37T-14T/428-106) HTS	FB2DRCK891HT	22	3	29312
142	DRIVE CHAIN KIT REVO ABSOLUTE (37T-14T/428-106) PART STATION	FB2DRCK891PS	18	2	100254
143	DRIVE CHAIN KIT REVO/FIT NEW (36T- 14T/428-106) HTS	FB2DRCK090HT	10	2	154698
144	DRIVE CHAIN KIT SATRIA FU-150 (43T- 14T/428-120) HTS	FB2DRCK131HT	27	2	71360
145	DRIVE CHAIN KIT SHOGUN (35T- 14T/428-100) HTS	FB2DRCK115HT	38	3	128160
146	DRIVE CHAIN KIT SMASH NEW (35T- 14T/428-104) HTS	FB2DRCK124HT	20	0	0
147	DRIVE CHAIN KIT VEGA ZR (40T- 15T/428-108) HTS	FB2DRCK838HT	6	0	0
148	FACE COMP ASSY MIO BLACK ROLLER HTS	FB2FACB031HT	5	1	42774
149	FILTER BEAT 17210-KVY-960 AHM	FX2FILTKVYAH	85	55	57200
150	FILTER VARIO 17210-KVB-930 AHM	FX2FLTR091AH	9	1	5215
151	FILTER VARIO 125 17210-KZR-600 AHM	FX2FLTRKZRAH	100	20	21800
152	FITTING LAMPU GRAND CY-84130	FB2FTLA05400	87	8	23280
153	FITTING LAMPU PRIMA CY-84100	FB2FTLA06000	240	10	26200
154	FOG LAMP BAJA LASER 90 WO/ BULB YELLOW S&S TL-018(H-615)	FB4FO05002SS	0	0	0
155	FOG LAMP BAJA LASER 100 W/ BULB RAINBOW S&S TL-015(605)HCI	FB4FO01000SS	0	0	0
156	FOG LAMP BAJA LASER 100 W/O BULB CLEAR S&S TL-015(H-605)	FB4FO22001SS	0	0	0
157	FOG LAMP W/ BULB CLEAR S&S YH-19 (SA-351)	FB4FOSA00200	5	1	40890
158	FOG LAMP W/ BULB WHITE TL-013(H-619)	FB4FO51000SS	6	2	25482

159	FRONT AXLE ALFA ZENKU/BGF	FB2AXFR003BG	82	5	18085
160	FRONT AXLE GL-PRO ZENKU/BGF	FB2AXFR056BG	46	7	19639
161	FRONT AXLE GRAND ZENKU/BGF	FB2AXFR054BG	20	5	17800
162	FRONT AXLE JUPITER-Z ZENKU/BGF	FB2AXFR028BG	25	3	13920
163	FRONT AXLE MIO ZENKU/BGF	FB2AXFR031BG	34	10	57400
164	FRONT AXLE RC-100 ZENKU/BGF	FB2AXFR110BG	12	3	4500
165	FRONT AXLE SHOGUN ZENKU/BGF	FB2AXFR115BG	12	10	31600
166	FRONT AXLE SHOGUN-125 ZENKU/BGF	FB2AXFR122BG	37	8	26800
167	FRONT AXLE SUPRA ZENKU/BGF	FB2AXFR068BG	17	8	26800
168	FRONT AXLE TORNADO ZENKU/BGF	FB2AXFR112BG	14	3	13050
169	FRONT AXLE VARIO ZENKU/BGF	FB2AXFR089BG	5	10	56200
170	FRONT DISC BRAKE ONLY BEAT ZENKU	FB2FBDO093ZE	12	2	50790
171	FRONT DISC BRAKE ONLY JUPITER-Z ZENKU	FB2FBDO028ZE	28	4	88056
172	FRONT DISC BRAKE ONLY MIO ZENKU	FB2FDBO031ZE	52	4	83152
173	FRONT DISC BRAKE ONLY REVO ABSOLUTE/BLADE ZENKU	FB2FBDO091ZE	18	4	89800
174	FRONT DISC BRAKE ONLY SUPRA FIT NEW	FB2FDBO087ZE	14	2	49450
175	FRONT DISC BRAKE ONLY SUPRA-X ZENKU	FB2FDBO068ZE	4	2	49010
176	FRONT DISC BRAKE ONLY VARIO ZENKU	FB2FBDO087ZE	16	2	42450
177	FRONT FENDER `A` REVO NEW 110 PART STATION 61100-KWW-A00FMB	FE2FEFA090PS	4	1	15148
178	FRONT FENDER `B` REVO NEW 110 PART STATION 61200-KWW-A00	FE2FEFB090PS	3	2	22454
179	FRONT FENDER BEAT ZENKU	FE2FENF093ZE	35	6	61400
180	FRONT FENDER C-70 BLACK ZENKU	FE2FDFB051ZE	13	0	0
181	FRONT FENDER C-70 RED ZENKU	FE2DFFR051ZE	20	0	0
182	FRONT FENDER JUPITER-MX PART STATION	FE2FENF030PS	21	6	87708

183	FRONT FENDER JUPITER-Z PART STATION	FE2FENF028PS	16	4	58668
184	FRONT FLASHER LIGHT ASSY LH TIGER/MEGA PRO CHROME XANADU	FB2FFSL093XA	9	2	26928
185	FRONT FLASHER LIGHT ASSY LH VIXION XANADU	FB2FFSL037XA	14	4	61682
186	FRONT FLASHER LIGHT ASSY RH TIGER/MEGA PRO CHROME XANADU	FB2FFSR093XA	4	2	25854
187	FRONT FLASHER LIGHT ASSY RH VIXION XANADU	FB2FFSR037XA	8	3	45780
188	FRONT SPROCKET 10T JUPITER W/BOX PART STATION (R)	FB2GEDX261PS	46	20	56660
189	FRONT SPROCKET 10T SUPRA W/BOX PART STATION (	FB2GEDX068PS	28	30	142080
190	FRONT SPROCKET 13T SUPRA ZENKU	FB2GEDE368ZE	32	5	15500
191	FRONT SPROCKET 14T CB-100,GL- 100,CG W/BOX PART STATION (R)	FB2GEDX064PS	15	15	62520
192	FRONT SPROCKET 14T JUPITER W/BOX PART STATION (R)	FB2GEDX026PS	51	29	88872
193	FRONT SPROCKET 14T PRIMA,GRAND,WIN CHROME W/BOX PART STATION (R)	FB2GEDX060PS	25	15	40520
194	FRONT SPROCKET 15T SUPRA W/BOX PART STATION (	FB2GEDX568PS	25	5	25185
195	FUEL COCK GL-100 ZENKU	FB2KBB0405ZE	67	10	39490
196	FUEL COCK GL-PRO ZENKU	FB2KBB0056ZE	15	5	96920
197	FUEL COCK JUPITER Z ZENKU	FB2KBO0028ZE	55	14	84189
198	FUEL COCK KHARISMA ZENKU	FB2KBB0079ZE	8	2	4034
199	FUEL COCK SATRIA ZENKU	FB2KBO0116ZE	6	2	5162
200	FUEL COCK SMASH ZENKU	FB2KBB0121ZE	46	3	19572
201	FUEL COCK SUPRA FIT NEW ZENKU	FB2KBB0087ZE	28	3	10260
202	FUEL GAUGE BEAT ZENKU	FB2FUGG039ZE	11	3	30090
203	FUEL GAUGE REVO ABSOLUTE ZENKU	FB2FUGG091ZE	27	5	51550

204	FUSE DX 30AH HENYU	HENYU	FB4ST30000HY	0	100	131000
205	FUSE DX MINI 30AH HENYU		FB4ST4M500HY	190	10	6740
206	GAS TANK CAP C-70		FB2GTCA05100	2	3	58344
207	GAS TANK CAP CB-100K2 CHROME ZENKU		FB2GTC0064ZE	74	12	89478
208	GAS TANK CAP CB-100K5 BLACK ZENKU		FB2GTCA062ZE	14	7	141400
209	GAS TANK CAP CB-100K5 CHROME ZENKU		FB2GTC0062ZE	47	5	61560
210	GAS TANK CAP RX-K ZENKU		FB2GTC0020ZE	44	4	46200
211	GAS TANK CAP VIXION ZENKU		FB2GTC0037ZE	14	2	17548
212	GASKET TOPSET CRYPTON ZENKU		FB2GSTP01300	26	3	2712
213	GASKET TOPSET JUPITER-Z PART STATION		FB2GSTP028PS	37	8	58872
214	GASKET TOPSET SHOGUN NEW ZENKU		FB2GSTP120ZE	8	5	27650
215	GASKET TOPSET SUPRA ZENKU		FB2GSTP068ZE	8	2	19500
216	GASKET TOPSET SUPRA FIT NEW/LEGENDA PART STATION		FB2GSTP087PS	29	10	53960
217	GASKET TOPSET VEGA ZR ZENKU		FB2GSTP038ZE	22	3	20850
218	HANDLE BRAKE ONLY SUPRA DISC BRAKE ZENKU		FE2HBONS68ZE	72	15	50010
219	HANDLEBAR MOTORCYCLE (PALANG PENDEK) 2MM ZENKU		FB2HBRPP00ZE	4	2	35220
220	HANDLEBAR MOTORCYCLE BISON (2MM) PART STATION		FB2HABR049PS	0	4	49668
221	HANDLEBAR MOTORCYCLE TIGER NEW (2MM) ZENKU		FB2HABR059ZE	30	7	60900
222	HEAD LAMP ASSY C-100/SUPRA XANADU		FB2HELA068XA	17	1	22870
223	HEAD LAMP ASSY FORCE-1 ZR XANADU		FB2HELA006XA	14	0	0
224	HEAD LAMP ASSY GRAND XANADU		FB2HELA054XA	10	0	0
225	HEAD LAMP ASSY RED SATRIA FU 150 NEW 2009 XANADU		FB2HELD131XA	0	1	90146
226	HEAD LAMP ASSY RX-K NEW CHROME XANADU		FB2HELRO10XA	10	1	46853

227	HEAD LAMP ASSY THUNDER 125 XANADU	FB2HELA130XA	3	1	41516
228	HEAD LAMP ASSY TIGER XANADU	FB2HELA059XA	1	0	0
229	HEAD LAMP ASSY VIXION XANADU	FB2HELA037XA	12	0	0
230	HEAD LAMP ASSY YB-100 CHROME XANADU	FB2HELA012XA	10	3	70050
231	HOLDER LH JUPITER ZENKU	FB2SHKI026ZE	3	2	44100
232	HOLDER LH MEGA PRO NEW 2007 ZENKU	FB2SHKI092ZE	3	2	25900
233	HOLDER LH SHOGUN ZENKU	FB2SHKI115ZE	13	2	36820
234	HOLDER LH SUPRA ZENKU	FB2SHKI068ZE	19	2	58320
235	HOLDER LH SUPRA-FIT ZENKU	FB2SHKI088ZE	7	3	44343
236	HOLDER LH/RH REVO ABSOLUTE ZENKU	FB2SHKK091ZE	10	5	91450
237	HOLDER LH/RH VARIO CBS ZENKU	FB2SHKK098ZE	15	1	10740
238	HOLDER RH JUPITER-MX ZENKU	FB2SHKA030ZE	15	2	12620
239	HOLDER RH SHOGUN ZENKU	FB2SHKA115ZE	9	1	12430
240	HOLDER RH SUPRA ZENKU	FB2SHKA068ZE	42	4	20960
241	HOLDER RH SUPRA-FIT ZENKU	FB2SHKA088ZE	12	3	13566
242	HOLDER RH VEGA-R ZENKU	FB2SHKA027ZE	14	2	26410
243	HOSE CLAMP 2' STAINLESS	FB4KLEM01500	0	25	40750
244	IGNITION COIL JUPITER ZENKU	FB2KOIL026ZE	17	3	43050
245	IGNITION COIL SUPRA ZENKU	FB2KOIL068ZE	14	4	35564
246	IGNITION COIL VEGA ZENKU	FB2KOIL014ZE	13	5	67200
247	KABEL SPEDO BEAT 44830-KVY-721 AHM	FX2KBSKVY1AH	877	234	63412
248	KABEL SPEDO VARIO 44830-KVB- T00 AHM	FX2KBSP092AH	0	125	59375
249	KARET TENSIONER SHOGUN W/BLISTER HTS	FB2KATE115ZE	2	1	10340

250	KARET TUTUP RUMAH ROLLER BEAT/BEAT FI 22011-GCC-770 AHM	FX2KTRRGCCAH	0	100	7500
251	KICK STARTER BEAT BGF	FB2PEST039BG	9	0	0
252	KICK STARTER C-700,ASTREA,GRAND,C- 800,SUPRA SAS/BGF	FB2PEST052RR	2	10	72800
253	KICK STARTER FORCE-1,ALVA SAS/BGF	FB2PEST003RR	78	7	60500
254	KICK STARTER MIO BGF	FB2PEST031BG	41	3	30600
255	KICK STARTER RC-100,RC-80,RC-110 SAS/BGF	FB2PEST11000	5	8	101088
256	KICK STARTER RX-S,RX-K,RX-100 SAS/BGF	FB2PEST008RR	112	4	50880
257	KICK STARTER SHOGUN SAS/BGF	FB2PEST115SA	93	2	38860
258	KICK STARTER SUPRA X 125 BGF	FB2PEST076BG	15	2	27588
259	KICK STARTER THUNDER 125 BGF	FB2PEST101BG	31	3	58110
260	KICK STARTER TIGER SAS/BGF	FB2PEST059SA	19	5	39600
261	KICK STARTER VARIO BGF	FB2PEST089BG	70	3	31020
262	KIPROK VARIO 31600-KVB-N51 AHM	FX2KPRKKVBAH	74	5	27750
263	LAKER 6201 RS (ISI 2) AHM	FX26201RS2AH	3	20	138480
264	LAP KANEBO CHAMOIS YELLOW MOTOGARD	FB4LAPCS40MG	59	4	30040
265	LEG SHIELD TENGAH SUPRA/SUPRA FIT 2007 PART STATION	FE2LEGM068PS	14	5	77460
266	MAIN SWITCH ASSY ALFA/FORCE-1 ZENKU	FB2KUKA003ZE	2	8	131320
267	MAIN SWITCH ASSY BEAT W/BOX HTS	FB2KUKA093HT	3	4	88800
268	MAIN SWITCH ASSY GRAND ZENKU	FB2KUKA054ZE	24	7	118118
269	MAIN SWITCH ASSY JUPITER ZENKU	FB2KUKA028ZE	9	2	38480
270	MAIN SWITCH ASSY JUPITER-Z ZENKU	FB2KUKB028ZE	15	2	50920
271	MAIN SWITCH ASSY MIO ZENKU	FB2KUKA031ZE	9	0	0
272	MAIN SWITCH ASSY SUPRA ZENKU	FB2KUKA068ZE	10	7	118160

273	MAIN SWITCH ASSY SUPRA-125 ZENKU	FB2KUKA082ZE	4	5	114850
274	MAIN SWITCH ASSY VEGA R NEW ZENKU	FB2KUKA032ZE	18	2	47294
275	MAIN SWITCH ASSY VEGA-ZR ZENKU	FB2KUKA038ZE	6	4	102360
276	MAIN SWITCH GL-PRO ZENKU	FB2KUKO056ZE	13	2	24226
277	MAIN SWITCH KHARISMA ZENKU	FB2KUKO079ZE	2	2	21134
278	MAIN SWITCH SUPRA ZENKU	FB2KUKO068ZE	0	2	18344
279	MAIN SWITCH VARIO ZENKU	FB2KUKO089ZE	5	3	69420
280	MANIFOLD/ISULATOR GL-100 ZENKU	FB2ISLT055ZE	19	5	26600
281	MASTER KIT BEAT W/BLISTER HTS	FB2MSTK039HT	90	10	43770
282	MASTER KIT F1-ZR W/BLISTER HTS	FB2MSTK006HT	20	10	42210
283	MASTER KIT MIO W/BLISTER HTS	FB2MSTK031HT	50	20	72310
284	MASTER KIT SHOGUN W/BLISTER HTS	FB2MSTK115HT	37	5	22700
285	MASTER KIT SUPRA X 125 RR W/BLISTER HTS	FB2MSTK076HT	74	30	138300
286	MIRROR RH/LH GRAND HTS	FE2MRR0054HT	25	5	17615
287	MIRROR RH/LH JUPITER Z NEW HTS	FE2MRR0033HT	128	16	103044
288	MIRROR RH/LH JUPITER Z NEW PART STATION	FE2MRR0033PS	18	5	114235
289	MIRROR RH/LH MIO PART STATION	FE2MRR0031PS	16	2	8704
290	MIRROR RH/LH REVO ABSOLUTE HTS	FE2MRR0091HT	1	5	17225
291	MIRROR RH/LH REVO ABSOLUTE PART STATION	FE2MRR0091PS	1	11	43042
292	MIRROR RH/LH SCOOPY HTS 88110-KYT-940	FE2MRR0097HT	56	4	12256
293	MIRROR RH/LH SMASH HTS	FE2MRR0121HT	0	5	26550
294	MIRROR RH/LH SMASH PART STATION	FE2MRR0121PS	20	10	69700
295	MIRROR RH/LH SUPRA HTS	FE2MRR0068HT	49	21	216458



296	MIRROR RH/LH SUPRA PART STATION	FE2MRR0068PS	5	5	86855
297	MIRROR RH/LH VARIO TECHNO PART STATION	FE2MRR0089PS	59	42	362714
298	MIRROR RH/LH VARIO 125 FI HTS 88110-KZR-600	FE2MRR0094HT	19	11	64970
299	MIRROR RH/LH (TANGKAI PENDEK) GRAND/GL-PRO/TECH/SUPRA/X HTS	FE2MRRPD00HT	63	4	40111
300	OLI COOLANT RADIATOR 08CLA-H50- 500 AHM	FX2OLCR000AH	29	2	1772
301	OLI ENDURO MATIC SAE 10-30 0.8L	FX2OLENDUMTC	38	63	134022
302	OLI ENDURO RACING	FX2OLENDRONG	40	72	152190
303	OLI FEDERAL MATIC 10W-30 (BOTOL ORANGE)	FX2OLFMT13OR	24	120	115920
304	OLI GEAR MATIC (140 ML) 90793- AJ813 YAMAHA GENUINE	FX2OLGM140YM	4	1	1430
305	OLI GEAR MATIC 0.1LT BTL SG10W- 40/MERAH NOUVO/MIO 90793- AJ80400 YMH-GENUI	FX2OLGM029YM	232	73	68436
306	OLI MESRAN B40 1LITER	FX2OLMSB401L	164	64	146636
307	OLI MESRAN B40 4LITER	FX2OLMSB404L	13	4	12744
308	OLI MESRAN 4T 0.8L MOTOR (BTL PUTIH)	FX2OLM4T08MS	24	24	20712
309	OLI MESRAN SAE 40 1LITER	FX2OLMSR401L	249	41	40410
310	OLI MESRAN SUPER 4LITER	FX2OLMSRN4LT	2	1	24493
311	OLI MESRANIA 2T SAE 20 1LT	FX2OLMSR2T1L	4	20	37540
312	OLI MPX1 10W30 SJ MA 1L 08232- M99-K8JN1 AHM	FX2OLPX100AH	254	305	8008
313	OLI PRIMA XP SAE 10-40 4LITER	FX2OLXP1404L	20	2	23538
314	OLI PRIMA-XP 1LT	FX2OLPR000XP	175	60	131040
315	OLI PRIMA-XP 4LT	FX2OLPR4LTXP	72	5	155372
316	OLI SGO 4T 1LTR 99000B9901LN100 SGP	FX2SGO1LSGP1	255	50	14344
317	OLI SGO 4T 800ML 99000B9901LN080 SGP	FX2OSGP008SG	31	2	3400
318	OLI SHELL ADVANCE AX7 4T 0.8	FX2OLIAX708S	12	12	10752
319	OLI SHELL AX5 1 LT	FX2OLSAX50SH	5	7	59535
320	OLI SHELL AX5 4T 0.8L	FX2OLSA000SH	80	17	65000
321	OLI SHELL HELIX HX5 1LT	FX2OLSH001HL	8	1	6000
322	OLI SHELL HELIX HX7 1LT	FX2OLSHHX71L	0	12	12696
323	OLI SPX2 800CC 08234-2MB-K8JNO AHM	FX2OLSPX208L	119	97	140810

324	OLI YAMALUBE 4T GOLD 0.8LT YAMAHA GENUINE	FX2OLYGOLDYM	97	79	53811
325	OLI YAMALUBE 4T SILVER YAMAHA GENUINE	FX2OLYS000YM	488	135	85589
326	PEDAL BRAKE CHROME TEBAL GRAND ZENKU HIGH QUALITY	FB2PERC086ZH	3	2	25220
327	PEDAL BRAKE CHROME TEBAL JUPITER- MX NEW ZENKU HIGH QUALITY	FB2PERC126ZH	12	5	65150
328	PEDAL BRAKE F-1/F1- ZR PART STATION	FB2PERE006PS	35	10	130720
329	PEDAL BRAKE GL-MAX/GL-PRO ZENKU HIGH QUALITY	FB2PERE056ZH	6	2	25220
330	PELINDUNG KNALPOT VARIO NEW 125/150 ESP 18318-K59-A10 AHM	FX2PLDKK59AH	1	9	16164
331	PELUMAS RANTAI (CHAIN LUBE ) 300 ML MOTOGARD	FB2CLUB300MG	23	1	19999
332	PER SKOK FR SUPRA 51401-KEV- 880 AHM	FX2PRSD068AH	0	30	147330
333	PIPE FRONT FORK ALFA,F-1,CRYPTON PART STATION	FB2ASDE003PS	12	2	92562
334	PIPE FRONT FORK RX-K NEW HTS	FB2ASDE010HT	2	2	152284
335	PISTON KIT JUPITER 0.75 ZENKU	FB2PSTK267ZE	2	1	1552
336	PISTON KIT JUPITER 1.00 ZENKU	FB2PSTK261ZE	0	1	995
337	PISTON KIT JUPITER STD ZENKU	FB2PSTK26SZE	0	1	1630
338	PISTON KIT SMASH/SMASH NEW 0.25 ZENKU	FB2PST1212ZE	2	1	11350
339	PISTON KIT SMASH/SMASH NEW STD ZENKU	FB2PST1210ZE	3	1	11350
340	PRIMARY CLUTCH ASSY SUPRA FIT NEW W/BLISTER ZENKU	FB2OTKA087ZE	4	4	123716
341	PULLY ASSY MIO ZENKU	FB2PLLA031ZE	3	1	116711
342	RADIUS/SPIRAL CHROME PLASTIK BOX PACKING 10G X 172 ZENKU	FB2RUJI172ZE	10	3	32760
343	RANTAI + GEAR SET JUPITER-MX 1S7- W001A-00 YAMAHA GENUINE	FX2RTGS030YM	6	1	19249
344	RANTAI + GEAR SET JUPITER-Z 5TP- WF01A-10 YAMAHA GENUINE	FX2RTGS5TPYM	21	2	10900
345	RANTAI + GEAR SET REVO 110 NEW 06401-KWW-900 AHM	FX2RTGSREVAH	68	34	99278
346	RANTAI + GEAR SET Satria FU150 NEW 27000B25G70NKIT SGP	FX2RTGS25NSG	8	1	7037

347	RANTAI + GEAR SET SUPRA 06401-KEV-881 AHM	FX2GRST068AH	3	3	273
348	RANTAI + GEAR SET SUPRA-FIT 06401-KTL-700 AHM	FX2RTGS093AH	213	37	113242
349	RANTAI KAMPRAT SET VARIO 06141-KVB-505 AHM	FX2RKSEKVBAH	29	1	7265
350	REAR AXLE FORCE-1 ZR PART STATION	FB2AXRE006PS	51	12	88596
351	REAR AXLE GRAND PART STATION	FB2AXRE054PS	16	30	129190
352	REAR AXLE JUPITER-MX PART STATION	FB2AXRE030PS	80	15	106695
353	REAR AXLE JUPITER-Z PART STATION	FB2AXRE028PS	5	30	155790
354	REAR AXLE KHARISMA ZENKU/BGF	FB2AXRE079BG	16	5	38750
355	REAR AXLE RX-K/RX-K NEW ZENKU	FB2AXRE023ZE	21	10	114900
356	REAR CUSHION BEAT NEW JJ	FB2SBBE100NJ	9	1	54385
357	REAR CUSHION GRAND NEW JJ	FB2SBBE054NJ	1	0	0
358	REAR CUSHION JUPITER-Z NEW NEW JJ	FB2SBBZ026NJ	8	1	45220
359	REAR CUSHION MIO NEW JJ	FB2SBBE031NJ	3	1	53793
360	REAR CUSHION SHOGUN-125 NEW JJ	FB2SBBE115NJ	1	2	157000
361	REAR CUSHION SUPRA NEW JJ	FB2SBBE068NJ	6	1	41068
362	REAR CUSHION VARIASI BLUE UNIVERSAL ZENKU XF-003-340MM	FB2SBBE340UZ	0	0	0
363	REAR CUSHION VARIASI RED UNIVERSAL ZENKU XF-003-320MM	FB2SBBE320RZ	0	0	0
364	REAR CUSHION VARIASI RED UNIVERSAL ZENKU XF-003-340MM	FB2SBBE340RZ	2	0	0
365	REAR CUSHION VEGA-ZR NEW JJ	FB2SBBE038NJ	4	1	27300
366	REAR FENDER C-70 GREEN ZENKU	FB2FDRG051ZE	41	1	76460
367	REAR FENDER SUPRA ZENKU	FE2FENR068ZE	17	4	28176
368	REAR SPROCKET 33T JUPITER ZENKU	FB2GEB3426ZE	30	6	90720

369	REAR SPROCKET 35T SMASH ZENKU	FB2GEBE121ZE	1	3	32710
370	REAR SPROCKET 36T GRAND,PRIMA CHROME ZENKU	FB2GEBE054ZE	0	2	24880
371	REAR SPROCKET 36T SUPRA FIT NEW PART STATION	FB2GEB0870PS	37	3	55266
372	REAR SPROCKET 37T SUPRA ZENKU	FB2RSPR068ZE	17	3	36480
373	REAR SPROCKET 38T JUPITER-Z W/BLISTER ZENKU	FB2GEBET28ZE	0	1	14090
374	REAR SPROCKET 38T SUPRA W/BLISTER ZENKU	FB2GEBET68ZE	2	2	29620
375	REAR SPROCKET 38T SUPRA FIT NEW W/BLISTER ZENKU	FB2GEBET87ZE	7	3	43800
376	REAR SPROCKET 39T JUPITER-Z W/BLISTER ZENKU	FB2GEBE928ZE	0	5	94600
377	REAR SPROCKET 40T JUPITER-Z ZENKU	FB2GEB4028ZE	15	5	80000
378	REAR SPROCKET 40T REVO ABSOLUTE (428) W/BOX HTS	FB2GBX4091HT	17	3	72174
379	REAR SPROCKET 40T VEGA ZR (428) W/BOX HTS	FB2GBX4038HT	22	3	75210
380	REAR SPROCKET 41T JUPITER-Z W/BLISTER ZENKU	FB2GEBEB28ZE	4	5	139600
381	RECTIFIER GRAND HTS	FB2KIPR05400	7	2	20744
382	RECTIFIER JUPITER-Z HTS	FB2KIPR026HT	8	4	48540
383	RECTIFIER SHOGUN HTS	FB2KIPR115HT	54	6	79640
384	RECTIFIER SHOGUN 125 HTS	FB2KIPR120HT	21	1	14087
385	RECTIFIER SUPRA HTS	FB2KIPR068HT	29	2	27656
386	ROLLER CHAIN 420 X 108 SPEED	FB2RAN4218SP	13	11	123767
387	ROLLER CHAIN 428 X 100 HTS	FB2RAN3000HT	41	3	41424
388	ROLLER CHAIN 428 X 100 SPEED	FB2RAN3000SP	37	6	125814
389	ROLLER CHAIN 428 X 104 PART STATION	FB2RAN8000PS	4	0	0
390	ROLLER CHAIN 428 X 108 PART STATION	FB2RAN2808PS	49	4	107940
391	ROLLER CHAIN 428 X 108 SPEED	FB2RAN806SPD	3	1	21342
392	ROLLER CHAIN 428 X 110 SPEED	FB2RAN4000SP	2	2	39818

393	ROLLER CHAIN 428 X 112 HTS	FB2RAN5000HT	5	5	98300
394	ROLLER CHAIN 428 X 112 SPEED	FB2RAN5000SP	10	2	65480
395	ROLLER CHAIN 428 X 120 SPEED	FB2RAN6000SP	3	2	35260
396	ROLLER CHAIN 428 X 128 SPEED	FB2RAN6008SP	12	4	122616
397	SEAL KLEP BLADE 12209-GB4-682 AHM	FX2SEALKLEPB	0	200	6400
398	SHAFT PIVOT GL-PRO ZENKU/BGF	FB2SHPI056BG	10	7	30100
399	SHAFT PIVOT KHARISMA ZENKU/BGF	FB2SHPI079BG	18	13	120510
400	SHAFT PIVOT SHOGUN-125 ZENKU/BGF	FB2SHPI122ZE	55	11	36850
401	SHAFT PIVOT SUPRA ZENKU/BGF	FB2SHPI068BG	5	15	76245
402	SHOCK BLK BEAT 52400-KVY-961 AHM	FX2SOKBKVYAH	1	1	17942
403	SHOCK BLK GRAND 52400-GN5- 831 AHM	FX2SOKB054AH	6	10	47460
404	SIDE STAND (STANDART SAMPING) GL-WIN ZENKU	FB2STDS058ZE	2	1	9600
405	SIDE STAND (STANDART SAMPING) GRAND ZENKU	FB2STDS054ZE	5	4	41708
406	SIDE STAND (STANDART SAMPING) JUPITER ZENKU	FB2STDS026ZE	0	2	18280
407	SIDE STAND (STANDART SAMPING) MIO SOUL ZENKU	FB2STDS036ZE	11	5	48100
408	SIDE STAND (STANDART SAMPING) SHOGUN/RC ZENKU	FB2STDS115ZE	1	7	54670
409	SIDE STAND (STANDART SAMPING) SUPRA X 125/REVO ZENKU	FB2STDS076ZE	7	9	77337
410	SLEEVE & NUT (BOSH GEAR) FORCE-1 ZENKU	FB2BOGE005ZE	84	12	82320
411	SLEEVE & NUT (BOSH GEAR) RX-K ZENKU	FB2BOGE020ZE	54	2	14340
412	SPACKBOR BELAKANG GRAND PART STATION	FE2SBOR054PS	16	4	16300
413	SPACKBOR DEPAN 'A' GRAND ZENKU	FE2SBOFA54ZE	9	3	46737
414	SPACKBOR DEPAN 'A' GRAND PART STATION	FE2SBOFA54PS	3	2	36006

415	SPACKBOR DEPAN 'B' GRAND ZENKU	FE2SBOFB54ZE	10	2	45624
416	SPARK PLUG CAP BEAT W/PLASTIK ZENKU	FB2COPB093ZE	101	5	16700
417	SPARK PLUG CAP SATRIA FU-150 W/PLASTIK ZENKU	FB2COPB131ZE	104	5	30050
418	SPARK PLUG CAP UNIVERSAL W/PLASTIK ZENKU	FB2COPBUVSZE	0	5	12350
419	SPEEDMETER CABLE VARIO HTS TYPE 'A'	FB2KBSA089HT	48	5	25380
420	SPEEDMETER GEAR ASSY (GEAR BOX) REVO ABSOLUTE ZENKU	FB2GEBX091ZE	22	11	84930
421	SPEEDMETER GEAR ASSY (GEAR BOX) SUPRA-X ZENKU	FB2GEBX176ZE	35	0	0
422	SPEEDMETER GEAR ASSY (GEAR BOX) VARIO ZENKU	FB2GEBX089ZE	1	2	15340
423	SPROCKET SET JUPITER-MX PART STATION	FB2SPST030PS	52	3	85353
424	SPROCKET SET RC-100/80 ZENKU/SAS/NEPCO/SPEED	FB2SPST110TB	45	6	30060
425	SPROCKET SET REVO ABSOLUTE (37T/14T) (428) SPEED	FB2SPST918SP	83	6	87852
426	SPROCKET SET SATRIA FU-150 (43T- 14T) PART STATION	FB2SPST131PS	40	10	108610
427	SPROCKET SET SMASH PART STATION	FB2SPST121PS	78	5	57025
428	SPROCKET SET SUPRA ZENKU/SAS/NEPCO/SPEED	FB2SPST068SP	15	3	80781
429	SPROCKET SET THUNDER-125 (45T- 14T) SPEED	FB2SPRT101SP	17	5	80600
430	SPROCKET SET VEGA ZR (40T-15T) 428 PART STATION	FB2SPSB041PS	20	10	122660
431	STARTING MOTOR ASSY SHOGUN ZENKU	FB2STMA115ZE	5	3	113190
432	STATOR ASSY GRAND + FUSER W/MIKA BOX ZENKU	FB2STAW054ZE	7	2	98256
433	STATOR ASSY REVO ABSOLUTE W/MIKA BOX PART STATION	FB2STAW091PS	1	1	67020
434	STATOR ASSY SUPRA + FUSER W/MIKA BOX PART STATION	FB2STAW068PS	1	1	29846
435	STOP LAMP ASSY GRAND 'TYPE A' XANADU	FB2STLA054XA	1	0	0
436	STOP LAMP ASSY RX-K NEW 2008 XANADU	FB2STLA038XA	6	2	48520

437	STOP LAMP ASSY RX-KING '2008 CRISTAL WITH LED TAIL LAMP XANADU	FB2STCL038XA	5	1	36780
438	SWING ARM / REAR FORK SILVER SUPRA (THICK) PART STATION	FB2SWARV68PS	1	2	107412
439	SWING ARM / REAR FORK SILVER SUPRA FIT NEW (THICK) ZENKU	FB2SWARV87ZE	0	2	101680
440	SWITCH STARTER KHARISMA ZENKU	FB2SWTS079ZE	54	3	32070
441	THROTTLE CABLE JUPITER-Z ZENKU	FB2KBGA028ZE	2	3	13740
442	THROTTLE CABLE MIO HTS TYPE A	FB2KGSA031HT	17	5	28450
443	THROTTLE CABLE PRIMA, GRAND ZENKU	FB2KBGA060ZE	30	10	12410
444	THROTTLE CABLE SUPRA HTS TYPE A	FB2KGSA068HT	10	10	22430
445	THROTTLE CABLE SUPRA ZENKU	FB2KBGA068ZE	9	5	20130
446	THROTTLE CABLE SUPRA FIT ZENKU	FB2KBGA088ZE	40	5	12450
447	TUBELESS VALVE 09 ZENKU	FB2TBLSV09ZE	14	1	17960
448	TUBELESS VALVE 10 ZENKU	FB2TBLSV10ZE	5	10	81390
449	VANBELT BEAT 23100-KVY- 901/902 AHM	FX2VNBL136AH	4	5	5845
450	VANBELT BEAT FI/SPACY (SET) 23100- KZL-BA0 AHM	FX2VNBKZLSAH	12	27	63286
451	VANBELT MIO M3/125 2PH-E7641- 00-00 YAMAHA GENUINE	FX2VBELTMIOL	1	2	6400
452	VANBELT MIO/NOUVO 5TL-E7641- 01 YAMAHA GENUINE	FX2VBLT033YM	42	32	27360
453	VANBELT RCVF VARIO 19.1 X 805 MITSUBOSHI	FA2VANB089MB	1	1	2700
454	VANBELT SET MIO-J 54P-WE76J-00 YAMAHA GENUINE	FX2VBST54PYM	49	3	2994
455	VANBELT VARIO (SET) 23100-KVB-BA0 AHM	FX2VNBLBA0AH	93	35	114071
456	VANBELT VARIO 125 (SET) 23100-KZR- BA0 AHM	FX2VNBKZRSAH	144	11	50136
457	VANBELT W/ROLLER WAGE MIO 5TL-E7641-00 HTS	FB2VARW031HT	9	1	70010

Cluster 2

C2	NO	nama barang	id barang	stk	qty	laba
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1	BEARING W/BLISTER PART STATION 6300-2RS	FB2LAK6300PS	850	349	1734379
2	BEARING W/BLISTER PART STATION 6301-2RS	FB2LAK6301PS	946	455	2036546
3	BRAKE SHOES TIGER/BEAT/VARIO/MEGA PRO W/BLISTER HTS (NON ASB)	FE2KRHPN93HT	128	91	1258795
4	DRIVE CHAIN KIT SUPRA (40T- 15T/428-104) PART STATION	FB2DRCK068PS	22	14	948226
5	FRONT FORK ASSY KLX-150 L ZENKU	FB2SBDE057ZE	5	4	1367680

Cluster 3

NO	nama barang	id barang	stk	qty	laba
1	ACCU YTZ-6V YUASA	FC2ACYTZ6VYS	19	17	501197
2	BALL RACE GRAND W/BLISTER ZENKU	FB2COMS054ZE	49	15	182100
3	BD 275 X 17 27517-000-00NR00 AHM	FX2BD27517AH	183	81	162563
4	BEARING W/BLISTER PART STATION 6201-2RS	FB2LAK6201PS	1892	185	561882
5	BEARING W/BLISTER PART STATION 6202-2RS	FB2LAK6202PS	1117	85	415589
6	BEARING W/BLISTER PART STATION 6203-2RS	FB2LAK6203PS	891	98	517869
7	BL RR VARIO 42711-KVB-930 AHM	FX2BLRR091AH	58	219	251750
8	BOHLAM DEPAN LEGENDA 34901-KFV-B51 AHM	FX2BHDP078AH	928	839	364944
9	BRAKE PAD JUPITER MX W/BLISTER HTS (NON ASBESTOS)	FE2KRPS020HT	375	45	252199
10	BRAKE SHOES HONDA W/BLISTER HTS (NON ASBESTOS)	FE2KRHPN00HT	141	68	550036
11	BRAKE SHOES HONDA W/BLISTER PART STATION (NON ASBESTOS)	FE2KRHPN00PS	478	31	188074
12	BRAKE SHOES MIO W/BLISTER HTS (NON ASBESTOS)	FE2KRWBN31HT	22	39	507981
13	BRAKE SHOES YAMAHA W/BLISTER HTS (NON ASBESTOS)	FE2KRYPN00HT	112	35	384520
14	BRAKE SHOES YAMAHA W/BLISTER PART STATION (NON ASBESTOS)	FE2KRYPN00PS	95	20	212080



15	COVER MUFFLER BEAT PART STATION	FE2CMUF093PS	73	17	174454
16	COVER MUFFLER BEAT FI PART STATION	FE2CMUF930PS	33	21	222253
17	DISC PAD REAR SUPRA X 125 ZENKU (NON ASBESTOS)	FE2DSPRN76ZE	190	54	300804
18	DISC PAD REVO ABSOLUTE ZENKU (NON ASBESTOS)	FE2DSPN091ZE	263	54	190183
19	DISC PAD SUPRA ZENKU (NON ASBESTOS)	FE2DSPN068ZE	802	98	423073
20	DRIVE CHAIN KIT GRAND (36T- 14T/428-100) PART STATION	FB2DRCK054PS	9	8	394968
21	DRIVE CHAIN KIT GRAND (36T- 14T/428-100) THM	FB2DRCK054TH	18	2	239998
22	DRIVE CHAIN KIT JUPITER MX (39T- 15T/428-112) HTS	FB2DRCK030HT	26	5	222150
23	DRIVE CHAIN KIT JUPITER-Z (36T- 15T/428-104) PART STATION	FB2DRCK028PS	33	9	666209
24	DRIVE CHAIN KIT KHARISMA (35T- 14T/420-104) PART STATION	FB2DRCK079PS	7	8	464152
25	DRIVE CHAIN KIT REVO ABSOLUTE (37T-14T/428-106) THM	FB2DRCK091TH	18	2	239998
26	DRIVE CHAIN KIT SUPRA (40T- 15T/428-104) THM	FB2DRCK068TH	18	2	255998
27	DRIVE CHAIN KIT VEGA ZR (40T- 15T/428-108) PART STATION	FB2DRCK838PS	4	6	493992
28	DRIVE CHAIN KIT VEGA ZR (40T- 15T/428-108) THM	FB2DRCK038TH	18	2	239998
29	DRIVE CHAIN KIT VIXION (42T- 14T/428-120) HTS	FB2DRCK037HT	4	5	292450
30	FLASER MOTORCYCLE 12V ZENKU	FB2FL12000ZE	319	72	170280
31	GAS TANK CAP NINJA ZENKU	FB2GTC0155ZE	11	7	250780
32	HANDLEBAR MOTORCYCLE NINJA (2MM) ZENKU	FB2HABR155ZE	11	18	223620
33	IGNITION COIL GRAND ZENKU	FB2KOIL054ZE	85	14	167545
34	KICK STARTER GL-PRO SAS/BGF	FB2PEST056RR	37	20	203200
35	KICK STARTER JUPITER-Z SAS/BGF	FB2PEST028SA	27	11	165175
36	MAIN SWITCH ASSY MIO SOUL ZENKU	FB2KUKA036ZE	0	6	182916

37	MAIN SWITCH ASSY REVO ABSOLUTE ZENKU	FB2KUKA091ZE	5	5	211620
38	MASTER KIT SUPRA W/BLISTER HTS	FB2MSTK068HT	270	46	170180
39	MIRROR RH/LH GRAND PART STATION	FE2MRR0054PS	22	14	184788
40	OLI ENDURO 4T 1LT	FX2OLEND4T1L	20	60	190080
41	OLI ENDURO 4T 800CC	FX2OLENDUR00	32	72	256752
42	OLI GEAR TRANSMISI 120ML 08264-M99-Z0BN9/08232-2MB- K8JN1 AHM	FX2OLGT120AH	-3	579	164865
43	OLI MESRAN B40 5LITER	FX2OLMSB405L	2	26	279710
44	OLI MESRAN 4T 0.8L	FX2OL4T000MS	66	145	177070
45	OLI MESRAN 4T 1LT	FX2OLIM100MS	76	144	426522
46	OLI SUPREME FLICK/FEDERAL MATIC 30 0.8	FX2OLFL800SU	232	390	418474
47	OLI SUPREME U TEC NEW 1 LTR SUPREME	FX2OLS1000SU	1092	595	630365
48	OLI SUPREME U TEC NEW 800 CC SUPREME	FX2OLSU000SU	833	758	404155
49	OLI SUPREME XX 0,8L SUPREME	FX2OSXX000SU	8	166	179948
50	OLI YAMALUBE MATIC YAMAHA GENUINE	FX2OLMT033YM	988	589	328396
51	OLI YAMALUBE SPORT 1 LITER YAMAHA GENUINE	FX2OLYB000YM	765	365	334754
52	PER SKOK DEPAN PRIMA/GRAND 51401-GN5-781 AHM	FX2PRSD060AH	0	200	428000
53	PRIMARY CLUTCH ASSY KHARISMA W/BLISTER ZENKU	FB2OTKA079ZE	1	5	166750
54	PRIMARY CLUTCH ASSY KHARISMA W/BOX ZENKU	FB2OTKX079ZE	6	4	176800
55	RANTAI + GEAR SET KHARISMA 06401-KPH-881 AHM	FX2RTGS079AH	52	108	365604
56	REAR AXLE GL-PRO PART STATION	FB2AXRE056PS	101	27	241476
57	REAR AXLE SUPRA PART STATION	FB2AXRE068PS	23	49	261178
58	REAR SPROCKET 36T GRAND,PRIMA CHROME PART STATION	FB2GEBE054PS	30	10	173250
59	REAR SPROCKET 40T REVO ABSOLUTE (428) W/BOX PART STATION (Y)	FB2GBX4091PS	7	8	177800
60	REAR SPROCKET 40T SUPRA ZENKU	FB2GEBE068ZE	63	13	276000

61	REAR SPROCKET 45T JUPITER-Z W/BOX PART STATION (Y)	FB2GBX4528PS	8	5	213705
62	ROLLER CHAIN 420 X 104 SPEED	FB2RAN200SPD	93	13	226854
63	ROLLER CHAIN 420 X 106 SPEED	FB2RAN4216SP	96	26	433286
64	ROLLER CHAIN 420 X 108 HTS	FB2RAN4218HT	26	23	298330
65	ROLLER CHAIN 428 X 104 HTS	FB2RAN8000HT	14	11	177519
66	ROLLER CHAIN 428 X 110 PART STATION	FB2RAN4000PS	36	8	198296
67	ROLLER CHAIN 428 X 112 PART STATION	FB2RAN5000PS	0	28	273252
68	SLEEVE & NUT (BOSH GEAR) GRAND ZENKU	FB2BOGE054ZE	64	38	226860
69	SPROCKET SET GRAND PART STATION	FB2SPST113PS	270	13	321107
70	SPROCKET SET JUPITER-Z PART STATION	FB2SPST30RPS	61	10	192265
71	SPROCKET SET RC-110/SHOGUN PART STATION	FB2SPST115PS	145	20	191230
72	SPROCKET SET SUPRA PART STATION	FB2SPST068PS	171	7	180194
73	SPROCKET SET SUPRA FIT NEW PART STATION	FB2SPSB042PS	56	9	212454
74	SPROCKET SET VEGA ZR (40T-15T) 428 SPEED	FB2SPSB041SP	79	6	191520
75	STARTING MOTOR ASSY GRAND ZENKU	FB2STMA054ZE	5	4	201339
76	SWING ARM / REAR FORK BLACK SUPRA (THICK) PART STATION	FB2SWARB68PS	0	4	222408
77	SWITCH STARTER GRAND ZENKU	FB2SWST054ZE	114	29	205630
78	THROTTLE CABLE BEAT-FI HTS TYPE A	FB2KBGS930HT	35	25	174000

Cluster 4

	NO	nama barang	id barang	stk	qty	laba
C4	1	BAN DALAM VARIO 275/300X14 27514-30014-000/44712-KZT-901 AHM	FX2BNDL091AH	152	285	1086828
	2	OLI MPX1 10W30 SJ MA 0.8L 08232-M99-K8JN9 AHM	FX2OLPX008AH	1785	1099	927896

	3	OLI MPX2 0,8LTR K8JN9	08232-M99- AHM	FX2OLIM002PX	937	3331	1362965
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Lampiran 3. Lembar Revisi Dosen Penguji 1



**PROGRAM STUDI TEKNIK INFORMATIKA**  
**FAKULTAS TEKNIK**  
**UNIVERSITAS MUHAMMADIYAH JEMBER**  
 Jl. Katimata 49 Telp. (0331) 336728 Fsx. (0331) 337957 Kotak Pos 104 Jember 68121

**DAFTAR REVISI PENGUJI 1**  
**SIDANG TUGAS AKHIR**

Nama Mahasiswa  
 Nomor Induk Mahasiswa  
 Judul Tugas Akhir

**RINALDY FIRMAN SUTEDJA**  
**1510651049**  
**PENGLOMPOKAN TINGKAT PENJUALAN PADA SPARE PARTS DI**  
**PT. PART STATION JEMBER MENGGUNAKAN METODE FUZZY C-**  
**MEANS CLUSTERING**  
 Selasa / 18 Juli 2019  
 13:00 WIB  
 CC I 2 (2.2)

Hari / Tanggal  
 Jam  
 Tempat

Bab/Halaman	Uraian	Keterangan
	revisi dataset fast processing.	<i>[Signature]</i>
	rumus masalah & judul diperbaiki / direvisi.	<i>[Signature]</i>
	figure & perbaikan poin (3) belum terukur.	<i>[Signature]</i>
	contoh perhitungan & perbaikan fuzzy mean.	<i>[Signature]</i>
	referensi sitas & perbaikan daftar pustaka & perbaikan	<i>[Signature]</i>
	contoh perhitungan elbow k vs excel.	<i>[Signature]</i>
	simpulan & perbaikan	<i>[Signature]</i>

Dosen Penguji 1

*[Signature]*

**AGUNG NILA GIRI, S.T., M.Kom.**

NB : Untuk Mahasiswa

Lampiran 4. Lembar Revisi Dosen Penguji 2



**PROGRAM STUDI TEKNIK INFORMATIKA**  
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**UNIVERSITAS MUHAMMADIYAH JEMBER**  
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**DAFTAR REVISI PENGUJI 2**  
**SIDANG TUGAS AKHIR**

Nama Mahasiswa  
 Nomor Induk Mahasiswa  
 Judul Tugas Akhir

: RINALDY FIRMAN SUTEDJA  
 : 1510651049  
 : PENGELOMPOKAN TINGKAT PENJUALAN PADA SPARE PARTS DI  
 PT. PART STATION JEMBER MENGGUNAKAN METODE FUZZY C-  
 MEANS CLUSTERING

Hari / Tanggal  
 Jam  
 Tempat

: Selasa / 18 Juli 2019  
 : 13:00 WIB  
 : CC LL2 (2.2)

Bab/Halaman	Uraian	Keterangan
	Penulisan diperbaiki, spasi dll	
	Problem dipele / penjualan mahasiswa palanis	
	Proses perhitungannya fuzzy cmeans di buat detail lagi	

Dosen Penguji 2



Triawan Adi Cahyanto, M.Kom

NB : Untuk Mahasiswa



## Biodata Penulis

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NIM : 15 1065 1049  
Nama : Rinaldy Firman Sutedja

---

Judul TA : PENGELOMPOKAN TINGKAT STOK PADA SPARE PARTS DI  
PT. PART STATION JEMBER MENGGUNAKAN METODE FUZZY C-MEANS  
CLUSTERING.

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Tempat Lahir : Semarang  
Tanggal Lahir : 20 Juli 1996  
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Alamat : Dusun Krajan RT 01 / RW 08, Mumbulsari, Jember.  
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Jurusan : S1-Teknik Informatika  
Dosen Pembimbing I : Ilham Saifudin, S.Pd., M.Si.