**Praktikum 8**

**ASSOCIATION RULES**

Berikut ini adalah data permintaan tindakan perbaikan (corrective action request) kepada pemasok atas kecacatan yang terjadi pada part yang dikirim.

Dataset : data arule CARrev2.xlsx

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| --- |
| library(arules)  library(arulesViz)  dataku=read.delim("clipboard")  categoric<- c("SUBCONT", "TYPE", "PROBLEM.PART","DITEMUKAN","ACTION","Sumber.Masalah")  transactions <- as(dataku[, categoric], "transactions")  itemFrequencyPlot(transactions, topN = 15)    rules <- apriori(transactions,parameter = list(minlen=3, supp=0.04, conf=0.9), appearance = list(rhs=c("Sumber.Masalah=Lingkungan dan metode","Sumber.Masalah=Metode","Sumber.Masalah=Operator","Sumber.Masalah=Operator dan mold","Sumber.Masalah=Operator, mold dan metode","Sumber.Masalah=Material dan mesin","Sumber.Masalah=Metode dan mold","Sumber.Masalah=Operator dan mesin","Sumber.Masalah=Operator, mesin dan metode","Sumber.Masalah=Mesin dan metode","Sumber.Masalah=Mold","Sumber.Masalah=Operator dan metode","Sumber.Masalah=Operator, metode dan lingkungan")))  Apriori  Parameter specification:  confidence minval smax arem aval originalSupport maxtime support minlen maxlen target ext  0.9 0.1 1 none FALSE TRUE 5 0.04 3 10 rules FALSE  Algorithmic control:  filter tree heap memopt load sort verbose  0.1 TRUE TRUE FALSE TRUE 2 TRUE  Absolute minimum support count: 1  set item appearances ...[13 item(s)] done [0.00s].  set transactions ...[73 item(s), 46 transaction(s)] done [0.00s].  sorting and recoding items ... [27 item(s)] done [0.00s].  creating transaction tree ... done [0.00s].  checking subsets of size 1 2 3 4 5 done [0.00s].  writing ... [6 rule(s)] done [0.00s].  creating S4 object ... done [0.00s].  inspect(rules)  lhs rhs support confidence lift count  [1] {SUBCONT= PT. Sinar Prima Plastisindo,  PROBLEM.PART=Cacat printing} => {Sumber.Masalah=Operator dan metode} 0.04347826 1 3.538462 2  [2] {SUBCONT= PT. Sinar Prima Plastisindo,  PROBLEM.PART=Cacat printing,  ACTION=Dikembalikan} => {Sumber.Masalah=Operator dan metode} 0.04347826 1 3.538462 2  [3] {SUBCONT= PT. Sinar Prima Plastisindo,  TYPE=Container,  PROBLEM.PART=Cacat printing} => {Sumber.Masalah=Operator dan metode} 0.04347826 1 3.538462 2  [4] {TYPE=Cover,  DITEMUKAN=Incoming,  ACTION=Seleksi produk} => {Sumber.Masalah=Operator} 0.04347826 1 5.750000 2  [5] {TYPE=Container,  DITEMUKAN=Incoming,  ACTION=Seleksi produk} => {Sumber.Masalah=Metode} 0.04347826 1 5.750000 2  [6] {SUBCONT= PT. Sinar Prima Plastisindo,  TYPE=Container,  PROBLEM.PART=Cacat printing,  ACTION=Dikembalikan} => {Sumber.Masalah=Operator dan metode} 0.04347826 1 3.538462 2  plot(rules, method="graph")    plot(rules, method="graph", engine = "interactive") |

Lakukan pengolahan data untuk mendapatkan rule terbaik menggunakan R dan manual excel. Nilai support dan confidence sesuai script R. Berikan interpretasi atas output yang dhasilkan.