Experiment-1.4

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Subject Name: Data Mining **Subject Code: 20CSP- 351**

Aim – Demonstration of FP growth algorithm on supermarket data.

Objective-

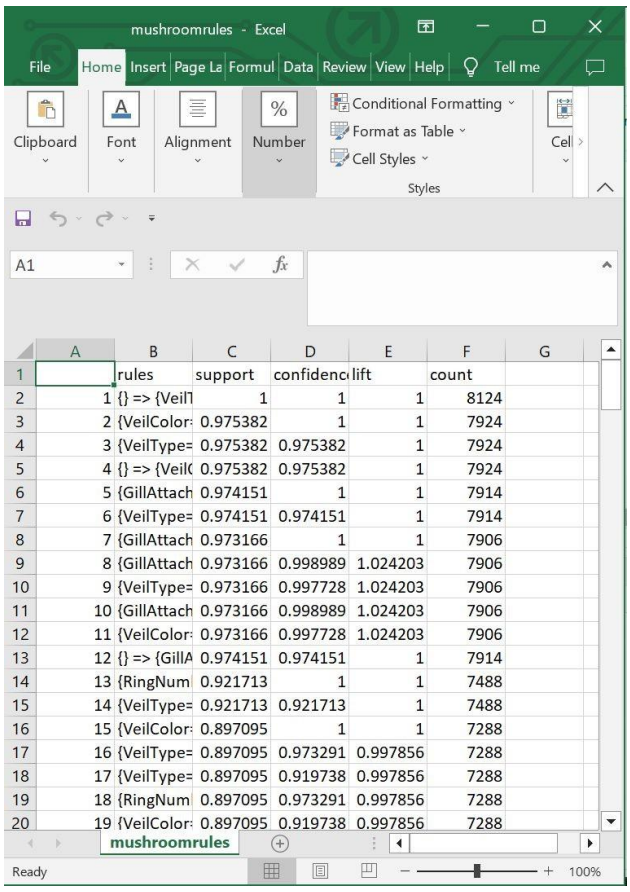
- Represent the reading of file using R studio
- Displaying the pattern on Weka Tool.
- Demonstration of association rule mining using Apriory Algorithm.

Script and Output-

```
library("arules")
library("arulesViz")
install.packages("fim4r")
data("Mushroom")
print(Mushroom)
summary(Mushroom)

fprules <- fim4r(Mushroom,method =
"fpgrowth",target="rules",supp=70,conf=60)

fprules()

inspect(fprules[1:5])
plot(fprules)
x<-as(fprules,"data.frame")
print(x)
write.csv(x,file="mushroomrules.csv")
```

```
Console   Terminal ×   Background Jobs ×
R 4.2.2 · ~/

> library("arules")
> data("Mushroom")
> fprules <- fim4r(Mushroom, method = "fpgrowth", target = "rules", supp = 70, conf = 60)
Package fim4r is required.
Download and install the package?
1: Yes
2: No

Selection: Yes
Installing package into 'C:/Users/ASUS/AppData/Local/R/win-library/4.2'
(as 'lib' is unspecified)
trying URL 'https://mhahsler.github.io/arules/docs/fim4r/fim4r_latest.tar.gz'
```

```
> fprules
set of 168 rules
> inspect(fprules[1:5])
    lhs                      rhs                    support   confidence lift count
[1] {}                    => {VeilType=partial}    1.0000000 1.0000000  1    8124
[2] {VeilColor=white}     => {VeilType=partial}    0.9753816 1.0000000  1    7924
[3] {VeilType=partial}    => {VeilColor=white}     0.9753816 0.9753816  1    7924
[4] {}                    => {VeilColor=white}     0.9753816 0.9753816  1    7924
[5] {GillAttached=free}   => {VeilType=partial}    0.9741507 1.0000000  1    7914
> x <- as(fprules,"data.frame")
> write.csv(x, file="mushroomrules.csv")
>
```



	A	rules	support	confidenc	lift	count
1						
2	1	{} => {VeilT	1	1	1	8124
3	2	{VeilColor=	0.975382	1	1	7924
4	3	{VeilType=	0.975382	0.975382	1	7924
5	4	{} => {VeilC	0.975382	0.975382	1	7924
6	5	{GillAttach	0.974151	1	1	7914
7	6	{VeilType=	0.974151	0.974151	1	7914
8	7	{GillAttach	0.973166	1	1	7906
9	8	{GillAttach	0.973166	0.998989	1.024203	7906
10	9	{VeilType=	0.973166	0.997728	1.024203	7906
11	10	{GillAttach	0.973166	0.998989	1.024203	7906
12	11	{VeilColor=	0.973166	0.997728	1.024203	7906
13	12	{} => {GillA	0.974151	0.974151	1	7914
14	13	{RingNum	0.921713	1	1	7488
15	14	{VeilType=	0.921713	0.921713	1	7488
16	15	{VeilColor=	0.897095	1	1	7288
17	16	{VeilType=	0.897095	0.973291	0.997856	7288
18	17	{VeilType=	0.897095	0.919738	0.997856	7288
19	18	{RingNum	0.897095	0.973291	0.997856	7288
20	19	{VeilColor=	0.897095	0.919738	0.997856	7288