Experiment - 1.4

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Subject Name: Data Mining Lab	**Date of Performance:** 06/03/2023

1. Aim:

Demonstration of FP Growth algorithm on supermarket data.

2. Objective:

To demonstration of FP Growth algorithm on supermarket data.

3. Summary :

FP Growth Algorithm : FP-growth algorithm is a popular and efficient algorithmused in data mining for finding frequent itemsets in large datasets. The algorithm uses a tree structure called the FP-tree to represent the frequent itemsets in the dataset. The algorithm is divided into two phases: the first phase involves building the FP-tree, and the second phase involves mining frequent itemsets from the FP-tree.

FP-growth algorithm has several advantages over traditional algorithms such as Apriori. It can handle large datasets efficiently and requires only a single pass over the dataset. It also generatesfewer candidate itemsets and has a faster runtime compared to Apriori. Therefore, FP-growth algorithm is widely used in various data mining applications such as market basket analysis, textmining, and bioinformatics.

Script/Code/Steps:

```
setwd("C:/Users/ASUS/OneDrive/Documents")
//assigning location
getwd()
library("arules")
//creating library
data("Mushroom")
//creating dataset
fprules <- fim4r(Mushroom, method = "fpgrowth", target = "rules", supp = 70, conf = 60)
fprules
inspect(fprules[1:5])
x <- as(fprules,"data.frame")
```

write.csv(x, file="mushroomrules.csv")

Output Screenshots :