Lab Exercise – 9: Apriori Implementation

NOTE:

* Prepare a PDF document and name the file as “Lab9_RegisterNo.pdf”.
* PDF file should consist Question No, Code, and Result for each Question.
* File Should be headed with your Register number, Slot number, Lab Exercise number.

Use the Solutions of Lab exercise 8 to do Lab Exercise 9

1. Develop a python code to generate frequent item sets using Apriori algorithm with minimum support is 3. Consider the following transactions/data:

Data 1:

(("a","b","c"), ("a","b"), ("a","b","d"), ("b","e"), ("b","c","e"), ("a","d","e"), ("a","c"), ("a","b","d"), ("c","e"), ("a","b","d","e"), ("a",'b','e','c'))

Data 2:

Generate synthetic data transactions (#30) for a supermarket store. This store sells the following products:
Fruits, Vegetables, Canned Goods, Frozen Foods, Meat, Fish and shellfish, Deli, Condiments & Spices, Sauces & Oils, Snacks, Bread & Bakery, Beverages, Pasta/Rice, Cereal, Baking, Personal Care, Health Care, Paper & Wrap, Household Supplies, Baby Items, Other items.

Each transaction should consist of at least two products and maximum of 12 products. Each time when we run, it should generate different transactions.

Data 3:

Generate synthetic data transactions at least 1000 with the items provided in excel sheet “GroceryList_spreadsheet.xls”.

2. Develop a python code to provide association rules from the generated frequent item sets in question 1 with minimum confidence of 80%. [Perform the comparison of your output with predefined packages output carried out in Lab Exercise 8.]

***** Do not use any predefined packages such as mlxtend, apyori to apply Apriori algorithm (for the questions 1 and 2).**

3. Use mlxtend and pyfpgrowth packages to apply fpgrowth algorithm on the above Data sets provided in Question 1.