Problem Solving

Assignment-3
Data Mining (CSE4052)

1. What do you mean by mining frequent patterns associations and correlations?
2. How do you mining frequent pattern? Explain with example?
3. What are the criteria for the classification of frequent pattern mining?
4. Why do we need Apriori algorithm for frequent pattern mining?
5. What are the applications of pattern mining?
6. What is market basket analysis used for?
7. What is frequency pattern analysis?
8. What are the limitations of Apriori algorithm?
9. What is the purpose of market basket analysis?
10. For the following given Transaction Data-set, Generate Rules using Apriori Algorithm. Consider the values as Support=50% and Confidence=75%

Transaction ID	**Items Purchased**
1	Bread, Cheese, Egg, Juice
2	Bread, Cheese, Juice
3	Bread, Milk, Yogurt
4	Bread, Juice, Milk
5	Cheese, Juice, Milk

11. What are the different types of market basket analysis in Data Mining?

12. For the following given transaction data set, generate rules using Apriori Algorithm. Consider the values as Support=22% and Confidence= 70%

Transaction ID	Items Purchased
1	I1,I2,I5
2	I2,I4
3	I2,I3
4	I1,I2,I4
5	I1,I3
6	I2,I3
7	I1,I3
8	I1,I2,I3,I5
9	I1,I2,I3

13. **Assume min. Support ort = 40%**
Marks: 10 M
Year: Dec 2015

14. Find the **frequent itemsets** and generate **association rules** on this. Assume that minimum support threshold (s = 33.33%) and minimum confident threshold (c = 60%)

Transaction ID	Items
T1	Hot Dogs, Buns, Ketchup
T2	Hot Dogs, Buns
T3	Hot Dogs, Coke, Chips
T4	Chips, Coke
T5	Chips, Ketchup
T6	Hot Dogs, Coke, Chips

15. .Find the **frequent itemsets** on this. Assume that minimum support (s = 3)

Transaction ID	Items
T1	Hot Dogs, Buns, Ketchup
T2	Hot Dogs, Buns
T3	Hot Dogs, Coke, Chips
T4	Chips, Coke
T5	Chips, Ketchup
T6	Hot Dogs, Coke, Chips

16.Construct FP-tree from a Transaction Database

TID	Items bought (o
100	{f, a, c, d, g, i, m, p}
200	{a, b, c, f, l, m, o}
300	{b, f, h, j, o, w}
400	{b, c, k, s, p}
500	{a, f, c, e, l, p, m, n}

17. Construct Conditional Pattern Bases and Conditional FP-Tree for above problem.

Solution:-

https://web.iitd.ac.in/~bspanda/MTL782FPTREE.pdf