Name: Sidhartha Satapathy
Net id: ss46

Homework 3 Solutions

Question 1.

Answer:

S1: [A,B,B,B,B,B,C,D,E,A,F,B,C]
S2: [F,D,D,D,E,E,A,F,D,A,B,Z,C]
S3: [A,D,F,A,D,E,C,B,F,F,B,A,A,E,A,A,C]

For itemset {D,E,F}

Length of minimum occurrence window in S1: 4 (D,E,A,F)
Length of minimum occurrence window in S2: 4 (E,A,F,D)
Length of minimum occurrence window in S3: 4 (F,A,D,E)

Number of outliers in outlier based minimum occurrence window in S1: 1 (D,E,A,F)
Number of outliers in outlier based minimum occurrence window in S2: 0 (F,D,D,D,E)
Number of outliers in outlier based minimum occurrence window in S3: 1 (F,A,D,E)

Question 2.

**I have implemented the apriori algorithm for the purpose of this assignment.
The following are the results I obtain on the data.txt file. The result has also been
saved on the file ss46-HW3.txt.**

Input:
0.5, 0.5
1, 2, 2, 2, 3, 4, 1, 5, 6
4, 5, 6
1, 4, 2, 5

Output:

Total number of frequent Itemsets: 19

Total number of outlier resilient frequent Itemsets: 14

Outlier resilient frequent Itemsets are:

1, 2

1

5, 6

2

1, 4

4

4, 5

5

6

1, 2, 4

1, 4, 5

4, 5, 6

2, 4

1, 2, 4, 5