Data Analytics - I Quiz-1 Date 28 August 2019

Q1: Given *six* items *{a, b, c, d, e, f}*, come up with a maximum number of transactions (list the items of the transactions) such that

a. The support for single items, double items, and triples items is all the same. If it is not possible, state clearly why. Else, show with one more added transaction, the support would not be the same.

b. Now, for any (k>6) items, state the core idea as to how to generate a maximum number of transactions (list the items of the transactions) so that all the single items, double items, and triple items have the same support. Justify your answer.

Q2: Consider a fact table, and ***k***, dimension tables, with each dimension table taking ***p*** values. Consider a ***kxp*** matrix ***C***, row ***i*** corresponding to dimension ***i***, and column ***j*** corresponding to the ***jth*** value of the dimension. The element **(i,j)** takes the value C_{ij}, which is the count (number) of fact table rows, having the ***jth*** value for the ***ith*** dimension. Give an example of matrix ***C***, and explain with examples about analytics possible with matrix ***C***.