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DWDM Assignment-1 on Association Rule Mining

1. Create your own transaction dataset in a matrix form where each row represents a transaction T_i, and the columns represent the items I_i.

   The minimum dimension of this matrix is 50×10.

   The cell values in the matrix are either 1 or 0, where 1 represent item I_j is purchased in transaction T_i, and 0 otherwise.

   The values must be assigned randomly for 500 cells (minimum).

   The dataset should be ready in the following format:

	I_1	I_2	I_3	I_4	I_5	I_6	I_7	I_8	I_9	I_{10}
T_1	1	1	1	0	0	0	0	1	1	0
T_2	1	0	1	1	0	1	0	0	1	0
…										
T_{50}	1	0	1	0	1	1	0	0	1	0

2. Determine the SUPPORT(I_j) for all the (single) items.
3. Implement (in C/C++/Java) any association rule mining algorithm to generate k frequent itemsets (k = 1, 2, 3). You may assume the ***min_support*** by yourself.
4. Generate any five valid association rules from your own dataset. You may assume the ***min_confidence*** by yourself.

Prepare a self-explanatory PDF file to report the datasets, frequent itemsets with support count, association rules with confidence count, and any other assumption that is required to be reported. Put the program in a text file and upload both in a zip file in Moodle.

(5 + 5 + 5 + 5 = 20)