

Test results from code, will show amount of transactions, amount of elements, minsup, minconf, and resulting frequency item set and association rules

**FOR DATABASE 1, size: 20 and contains: 9 elements**

	0	1	2	3	4	5	6	7	
0	sunflower	bellflower	None	None	None	None	None	None	None
1	rose	tulips	peonies	None	None	None	None	None	None
2	tulips	peonies	sunflower	bellflower	dahlia	marigold	None	None	None
3	dahlia	marigold	daisy	violet	None	None	None	None	None
4	rose	None	None	None	None	None	None	None	None
5	rose	tulips	None	None	None	None	None	None	None
6	rose	dahlia	marigold	daisy	None	None	None	None	None
7	sunflower	bellflower	None	None	None	None	None	None	None
8	bellflower	dahlia	marigold	daisy	violet	None	None	None	None
9	rose	tulips	peonies	None	None	None	None	None	None
10	rose	tulips	None	None	None	None	None	None	None
11	rose	marigold	daisy	violet	None	None	None	None	None
12	sunflower	violet	daisy	None	None	None	None	None	None
13	dahlia	daisy	None	None	None	None	None	None	None
14	marigold	daisy	violet	None	None	None	None	None	None
15	rose	daisy	violet	None	None	None	None	None	None
16	sunflower	bellflower	dahlia	marigold	None	None	None	None	None
17	tulips	None	None	None	None	None	None	None	None
18	rose	marigold	None	None	None	None	None	None	None
19	rose	tulips	peonies	sunflower	bellflower	dahlia	marigold	daisy	

Enter in your minsup threshold value:  $>? \frac{1}{6}$

Enter in your minconf threshold value:  $>? \frac{1}{2}$

### #RESULTING FREQUENCY ITEMSET

0.2 ['peonies']  
0.3 ['sunflower']  
0.5 ['rose']  
0.35 ['dahlia']  
0.3 ['bellflower']  
0.3 ['violet']  
0.35 ['tulips']  
0.45 ['marigold']  
0.45 ['daisy']  
0.2 ['peonies', 'tulips']  
0.25 ['sunflower', 'bellflower']  
0.25 ['rose', 'tulips']  
0.2 ['rose', 'marigold']  
0.2 ['rose', 'daisy']  
0.2 ['dahlia', 'bellflower']  
0.3 ['dahlia', 'marigold']  
0.25 ['dahlia', 'daisy']  
0.2 ['bellflower', 'marigold']  
0.2 ['violet', 'marigold']  
0.3 ['violet', 'daisy']  
0.3 ['marigold', 'daisy']  
0.2 ['dahlia', 'bellflower', 'marigold']  
0.2 ['dahlia', 'marigold', 'daisy']  
0.2 ['violet', 'marigold', 'daisy']

### #RESULTING ASSOCIATION RULES

['peonies'] ----> ['tulips'] with a confidence of 1.0  
['tulips'] ----> ['peonies'] with a confidence of 0.5714285714285714

['sunflower'] ---> ['bellflower'] with a confidence of 0.8333333333333334

['bellflower'] ---> ['sunflower'] with a confidence of 0.8333333333333334

['rose'] ---> ['tulips'] with a confidence of 0.5

['tulips'] ---> ['rose'] with a confidence of 0.7142857142857143

['dahlia'] ---> ['bellflower'] with a confidence of 0.5714285714285714

['bellflower'] ---> ['dahlia'] with a confidence of 0.6666666666666666

['dahlia'] ---> ['marigold'] with a confidence of 0.8571428571428571

['marigold'] ---> ['dahlia'] with a confidence of 0.6666666666666666

['dahlia'] ---> ['daisy'] with a confidence of 0.7142857142857143

['daisy'] ---> ['dahlia'] with a confidence of 0.5555555555555556

['bellflower'] ---> ['marigold'] with a confidence of 0.6666666666666666

['violet'] ---> ['marigold'] with a confidence of 0.6666666666666666

['violet'] ---> ['daisy'] with a confidence of 1.0

['daisy'] ---> ['violet'] with a confidence of 0.6666666666666666

['marigold'] ---> ['daisy'] with a confidence of 0.6666666666666666

['daisy'] ---> ['marigold'] with a confidence of 0.6666666666666666

['dahlia'] ---> ['bellflower', 'marigold'] with a confidence of 0.5714285714285714

['dahlia', 'bellflower'] ---> ['marigold'] with a confidence of 1.0

['dahlia'] ---> ['marigold', 'bellflower'] with a confidence of 0.5714285714285714

['dahlia', 'marigold'] ---> ['bellflower'] with a confidence of 0.6666666666666666

['bellflower'] ---> ['dahlia', 'marigold'] with a confidence of 0.6666666666666666

['bellflower', 'dahlia'] ---> ['marigold'] with a confidence of 1.0

['bellflower'] ---> ['marigold', 'dahlia'] with a confidence of 0.6666666666666666

['bellflower', 'marigold'] ---> ['dahlia'] with a confidence of 1.0

['marigold', 'dahlia'] ---> ['bellflower'] with a confidence of 0.6666666666666666

['marigold', 'bellflower'] ---> ['dahlia'] with a confidence of 1.0

['dahlia'] ---> ['marigold', 'daisy'] with a confidence of 0.5714285714285714

['dahlia', 'marigold'] ---> ['daisy'] with a confidence of 0.6666666666666666

['dahlia'] ---> ['daisy', 'marigold'] with a confidence of 0.5714285714285714

['dahlia', 'daisy'] ---> ['marigold'] with a confidence of 0.8

['marigold', 'dahlia'] ---> ['daisy'] with a confidence of 0.6666666666666666

['marigold', 'daisy'] ---> ['dahlia'] with a confidence of 0.6666666666666666

['daisy', 'dahlia'] ---> ['marigold'] with a confidence of 0.8

['daisy', 'marigold'] ---> ['dahlia'] with a confidence of 0.6666666666666666

['violet'] ---> ['marigold', 'daisy'] with a confidence of 0.6666666666666666

['violet', 'marigold'] ---> ['daisy'] with a confidence of 1.0

['violet'] ---> ['daisy', 'marigold'] with a confidence of 0.6666666666666666

['violet', 'daisy'] ---> ['marigold'] with a confidence of 0.6666666666666666

['marigold', 'violet'] ---> ['daisy'] with a confidence of 1.0

['marigold', 'daisy'] ---> ['violet'] with a confidence of 0.6666666666666666

['daisy', 'violet'] ---> ['marigold'] with a confidence of 0.6666666666666666

['daisy', 'marigold'] ---> ['violet'] with a confidence of 0.6666666666666666

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**FOR DATABASE 2, size: 20 and contains: 8 elements**

|    | 0      | 1      | 2      | 3      | 4     | 5      | 6     |
|----|--------|--------|--------|--------|-------|--------|-------|
| 0  | bread  | milk   | None   | None   | None  | None   | None  |
| 1  | beer   | eggs   | coke   | towels | pizza | None   | None  |
| 2  | beer   | pizza  | None   | None   | None  | None   | None  |
| 3  | bread  | milk   | beer   | eggs   | coke  | towels | pizza |
| 4  | bread  | diaper | beer   | eggs   | None  | None   | None  |
| 5  | towels | pizza  | bread  | milk   | None  | None   | None  |
| 6  | pizza  | coke   | None   | None   | None  | None   | None  |
| 7  | coke   | None   | None   | None   | None  | None   | None  |
| 8  | milk   | diaper | beer   | coke   | None  | None   | None  |
| 9  | milk   | beer   | coke   | None   | None  | None   | None  |
| 10 | pizza  | coke   | beer   | None   | None  | None   | None  |
| 11 | diaper | pizza  | beer   | None   | None  | None   | None  |
| 12 | bread  | milk   | diaper | beer   | None  | None   | None  |
| 13 | bread  | beer   | None   | None   | None  | None   | None  |
| 14 | beer   | milk   | None   | None   | None  | None   | None  |
| 15 | beer   | milk   | coke   | None   | None  | None   | None  |
| 16 | bread  | milk   | diaper | coke   | None  | None   | None  |

|    |        |        |      |      |      |      |      |
|----|--------|--------|------|------|------|------|------|
| 17 | beer   | milk   | None | None | None | None | None |
| 18 | towels | diaper | beer | None | None | None | None |
| 19 | milk   | eggs   | None | None | None | None | None |

Enter in your minsup threshold value: >? 2/7

Enter in your minconf threshold value: >? 1/3

### #RESULTING FREQUENCY ITEMSET

0.35 ['pizza']  
 0.3 ['diaper']  
 0.55 ['milk']  
 0.35 ['bread']  
 0.45 ['coke']  
 0.7 ['beer']  
 0.35 ['milk', 'beer']  
 0.3 ['coke', 'beer']

### #RESULTING ASSOCIATION RULES

['milk'] ---> ['beer'] with a confidence of 0.6363636363636364  
 ['beer'] ---> ['milk'] with a confidence of 0.5  
 ['coke'] ---> ['beer'] with a confidence of 0.6666666666666666  
 ['beer'] ---> ['coke'] with a confidence of 0.42857142857142855

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### FOR DATABASE 3, size: 20 and contains: 8 elements

|   | 0            | 1            | 2     | 3    | 4    | 5    | 6    |
|---|--------------|--------------|-------|------|------|------|------|
| 0 | house coffee |              | None  | None | None | None | None |
| 1 | latte        | sandwich     | None  | None | None | None | None |
| 2 | juice        | salad        | None  | None | None | None | None |
| 3 | tea          | house coffee | juice | None | None | None | None |
| 4 | house coffee | sandwich     | None  | None | None | None | None |
| 5 | latte        | pastry       | None  | None | None | None | None |

|    |              |          |          |          |          |       |       |
|----|--------------|----------|----------|----------|----------|-------|-------|
| 6  | house coffee | tea      | None     | None     | None     | None  | None  |
| 7  | tea          | pastry   | None     | None     | None     | None  | None  |
| 8  | house coffee | sandwich | pastry   | salad    | juice    | None  | None  |
| 9  | latte        | sandwich | pastry   | salad    | mocha    | juice | None  |
| 10 | salad        | mocha    | juice    | None     | None     | None  | None  |
| 11 | house coffee | tea      | latte    | None     | None     | None  | None  |
| 12 | house coffee | salad    | mocha    | juice    | None     | None  | None  |
| 13 | tea          | latte    | sandwich | juice    | pastry   | salad | None  |
| 14 | mocha        | juice    | tea      | latte    | sandwich | None  | None  |
| 15 | salad        | mocha    | tea      | None     | None     | None  | None  |
| 16 | house coffee | tea      | latte    | sandwich | pastry   | salad | mocha |
| 17 | tea          | latte    | sandwich | None     | None     | None  | None  |
| 18 | sandwich     | salad    | None     | None     | None     | None  | None  |
| 19 | pastry       | sandwich | salad    | juice    | None     | None  | None  |

Enter in your minsup threshold value: >? 1/7

Enter in your minconf threshold value: >? 2/3

## #RESULTING FREQUENCY ITEMSETS

0.3 ['mocha']

0.4 ['house coffee']

0.45 ['juice']

0.5 ['sandwich']

0.45 ['tea']

0.35 ['pastry']

0.4 ['latte']

0.5 ['salad']

0.2 ['mocha', 'juice']

0.15 ['mocha', 'sandwich']

0.15 ['mocha', 'tea']

0.15 ['mocha', 'latte']

0.25 ['mocha', 'salad']

0.15 ['house coffee', 'juice']  
0.15 ['house coffee', 'sandwich']  
0.2 ['house coffee', 'tea']  
0.15 ['house coffee', 'salad']  
0.25 ['juice', 'sandwich']  
0.15 ['juice', 'tea']  
0.2 ['juice', 'pastry']  
0.15 ['juice', 'latte']  
0.35 ['juice', 'salad']  
0.2 ['sandwich', 'tea']  
0.25 ['sandwich', 'pastry']  
0.3 ['sandwich', 'latte']  
0.3 ['sandwich', 'salad']  
0.15 ['tea', 'pastry']  
0.25 ['tea', 'latte']  
0.15 ['tea', 'salad']  
0.2 ['pastry', 'latte']  
0.25 ['pastry', 'salad']  
0.15 ['latte', 'salad']  
0.15 ['mocha', 'juice', 'salad']  
0.15 ['mocha', 'sandwich', 'latte']  
0.2 ['juice', 'sandwich', 'pastry']  
0.15 ['juice', 'sandwich', 'latte']  
0.2 ['juice', 'sandwich', 'salad']  
0.2 ['juice', 'pastry', 'salad']  
0.2 ['sandwich', 'tea', 'latte']  
0.15 ['sandwich', 'pastry', 'latte']  
0.25 ['sandwich', 'pastry', 'salad']  
0.15 ['sandwich', 'latte', 'salad']  
0.15 ['pastry', 'latte', 'salad']  
0.2 ['juice', 'sandwich', 'pastry', 'salad']

0.15 ['sandwich', 'pastry', 'latte', 'salad']

## #RESULTING ASSOCIATION RULES

['mocha'] ---> ['salad'] with a confidence of 0.8333333333333334

['juice'] ---> ['salad'] with a confidence of 0.7777777777777778

['salad'] ---> ['juice'] with a confidence of 0.7

['pastry'] ---> ['sandwich'] with a confidence of 0.7142857142857143

['latte'] ---> ['sandwich'] with a confidence of 0.75

['pastry'] ---> ['salad'] with a confidence of 0.7142857142857143

['mocha', 'juice'] ---> ['salad'] with a confidence of 0.75

['juice', 'mocha'] ---> ['salad'] with a confidence of 0.75

['mocha', 'sandwich'] ---> ['latte'] with a confidence of 1.0

['mocha', 'latte'] ---> ['sandwich'] with a confidence of 1.0

['sandwich', 'mocha'] ---> ['latte'] with a confidence of 1.0

['latte', 'mocha'] ---> ['sandwich'] with a confidence of 1.0

['juice', 'sandwich'] ---> ['pastry'] with a confidence of 0.8

['juice', 'pastry'] ---> ['sandwich'] with a confidence of 1.0

['sandwich', 'juice'] ---> ['pastry'] with a confidence of 0.8

['sandwich', 'pastry'] ---> ['juice'] with a confidence of 0.8

['pastry', 'juice'] ---> ['sandwich'] with a confidence of 1.0

['pastry', 'sandwich'] ---> ['juice'] with a confidence of 0.8

['juice', 'latte'] ---> ['sandwich'] with a confidence of 1.0

['latte', 'juice'] ---> ['sandwich'] with a confidence of 1.0

['juice', 'sandwich'] ---> ['salad'] with a confidence of 0.8

['sandwich', 'juice'] ---> ['salad'] with a confidence of 0.8

['juice', 'pastry'] ---> ['salad'] with a confidence of 1.0

['pastry', 'juice'] ---> ['salad'] with a confidence of 1.0

['pastry', 'salad'] ---> ['juice'] with a confidence of 0.8

['salad', 'pastry'] ---> ['juice'] with a confidence of 0.8

['sandwich', 'tea'] ---> ['latte'] with a confidence of 1.0

['tea', 'sandwich'] ---> ['latte'] with a confidence of 1.0



['tea', 'latte'] ---> ['sandwich'] with a confidence of 0.8

['latte', 'tea'] ---> ['sandwich'] with a confidence of 0.8

['pastry', 'latte'] ---> ['sandwich'] with a confidence of 0.75

['latte', 'pastry'] ---> ['sandwich'] with a confidence of 0.75

['sandwich', 'pastry'] ---> ['salad'] with a confidence of 1.0

['sandwich', 'salad'] ---> ['pastry'] with a confidence of 0.8333333333333334

['pastry'] ---> ['sandwich', 'salad'] with a confidence of 0.7142857142857143

['pastry', 'sandwich'] ---> ['salad'] with a confidence of 1.0

['pastry'] ---> ['salad', 'sandwich'] with a confidence of 0.7142857142857143

['pastry', 'salad'] ---> ['sandwich'] with a confidence of 1.0

['salad', 'sandwich'] ---> ['pastry'] with a confidence of 0.8333333333333334

['salad', 'pastry'] ---> ['sandwich'] with a confidence of 1.0

['latte', 'salad'] ---> ['sandwich'] with a confidence of 1.0

['salad', 'latte'] ---> ['sandwich'] with a confidence of 1.0

['pastry', 'latte'] ---> ['salad'] with a confidence of 0.75

['latte', 'pastry'] ---> ['salad'] with a confidence of 0.75

['latte', 'salad'] ---> ['pastry'] with a confidence of 1.0

['salad', 'latte'] ---> ['pastry'] with a confidence of 1.0

['juice', 'sandwich'] ---> ['pastry', 'salad'] with a confidence of 0.8

['juice', 'sandwich', 'pastry'] ---> ['salad'] with a confidence of 1.0

['juice', 'sandwich'] ---> ['salad', 'pastry'] with a confidence of 0.8

['juice', 'sandwich', 'salad'] ---> ['pastry'] with a confidence of 1.0

['juice', 'pastry'] ---> ['sandwich', 'salad'] with a confidence of 1.0

['juice', 'pastry', 'sandwich'] ---> ['salad'] with a confidence of 1.0

['juice', 'pastry'] ---> ['salad', 'sandwich'] with a confidence of 1.0

['juice', 'pastry', 'salad'] ---> ['sandwich'] with a confidence of 1.0

['juice', 'salad', 'sandwich'] ---> ['pastry'] with a confidence of 1.0

['juice', 'salad', 'pastry'] ---> ['sandwich'] with a confidence of 1.0

['sandwich', 'juice'] ---> ['pastry', 'salad'] with a confidence of 0.8

['sandwich', 'juice', 'pastry'] ---> ['salad'] with a confidence of 1.0

['sandwich', 'juice'] ---> ['salad', 'pastry'] with a confidence of 0.8

['sandwich', 'juice', 'salad'] ---> ['pastry'] with a confidence of 1.0

['sandwich', 'pastry'] ---> ['juice', 'salad'] with a confidence of 0.8

['sandwich', 'pastry', 'juice'] ---> ['salad'] with a confidence of 1.0

['sandwich', 'pastry'] ---> ['salad', 'juice'] with a confidence of 0.8

['sandwich', 'pastry', 'salad'] ---> ['juice'] with a confidence of 0.8

['sandwich', 'salad', 'juice'] ---> ['pastry'] with a confidence of 1.0

['sandwich', 'salad', 'pastry'] ---> ['juice'] with a confidence of 0.8

['pastry', 'juice'] ---> ['sandwich', 'salad'] with a confidence of 1.0

['pastry', 'juice', 'sandwich'] ---> ['salad'] with a confidence of 1.0

['pastry', 'juice'] ---> ['salad', 'sandwich'] with a confidence of 1.0

['pastry', 'juice', 'salad'] ---> ['sandwich'] with a confidence of 1.0

['pastry', 'sandwich'] ---> ['juice', 'salad'] with a confidence of 0.8

['pastry', 'sandwich', 'juice'] ---> ['salad'] with a confidence of 1.0

['pastry', 'sandwich'] ---> ['salad', 'juice'] with a confidence of 0.8

['pastry', 'sandwich', 'salad'] ---> ['juice'] with a confidence of 0.8

['pastry', 'salad'] ---> ['juice', 'sandwich'] with a confidence of 0.8

['pastry', 'salad', 'juice'] ---> ['sandwich'] with a confidence of 1.0

['pastry', 'salad'] ---> ['sandwich', 'juice'] with a confidence of 0.8

['pastry', 'salad', 'sandwich'] ---> ['juice'] with a confidence of 0.8

['salad', 'juice', 'sandwich'] ---> ['pastry'] with a confidence of 1.0

['salad', 'juice', 'pastry'] ---> ['sandwich'] with a confidence of 1.0

['salad', 'sandwich', 'juice'] ---> ['pastry'] with a confidence of 1.0

['salad', 'sandwich', 'pastry'] ---> ['juice'] with a confidence of 0.8

['salad', 'pastry'] ---> ['juice', 'sandwich'] with a confidence of 0.8

['salad', 'pastry', 'juice'] ---> ['sandwich'] with a confidence of 1.0

['salad', 'pastry'] ---> ['sandwich', 'juice'] with a confidence of 0.8

['salad', 'pastry', 'sandwich'] ---> ['juice'] with a confidence of 0.8

['sandwich', 'pastry', 'latte'] ---> ['salad'] with a confidence of 1.0

['sandwich', 'latte', 'pastry'] ---> ['salad'] with a confidence of 1.0

['sandwich', 'latte', 'salad'] ---> ['pastry'] with a confidence of 1.0

['sandwich', 'salad', 'latte'] ---> ['pastry'] with a confidence of 1.0

['pastry', 'sandwich', 'latte'] ---> ['salad'] with a confidence of 1.0

['pastry', 'latte'] ---> ['sandwich', 'salad'] with a confidence of 0.75

['pastry', 'latte', 'sandwich'] ---> ['salad'] with a confidence of 1.0

['pastry', 'latte'] ---> ['salad', 'sandwich'] with a confidence of 0.75

['pastry', 'latte', 'salad'] ---> ['sandwich'] with a confidence of 1.0

['pastry', 'salad', 'latte'] ---> ['sandwich'] with a confidence of 1.0

['latte', 'sandwich', 'pastry'] ---> ['salad'] with a confidence of 1.0

['latte', 'sandwich', 'salad'] ---> ['pastry'] with a confidence of 1.0

['latte', 'pastry'] ---> ['sandwich', 'salad'] with a confidence of 0.75

['latte', 'pastry', 'sandwich'] ---> ['salad'] with a confidence of 1.0

['latte', 'pastry'] ---> ['salad', 'sandwich'] with a confidence of 0.75

['latte', 'pastry', 'salad'] ---> ['sandwich'] with a confidence of 1.0

['latte', 'salad'] ---> ['sandwich', 'pastry'] with a confidence of 1.0

['latte', 'salad', 'sandwich'] ---> ['pastry'] with a confidence of 1.0

['latte', 'salad'] ---> ['pastry', 'sandwich'] with a confidence of 1.0

['latte', 'salad', 'pastry'] ---> ['sandwich'] with a confidence of 1.0

['salad', 'sandwich', 'latte'] ---> ['pastry'] with a confidence of 1.0

['salad', 'pastry', 'latte'] ---> ['sandwich'] with a confidence of 1.0

['salad', 'latte'] ---> ['sandwich', 'pastry'] with a confidence of 1.0

['salad', 'latte', 'sandwich'] ---> ['pastry'] with a confidence of 1.0

['salad', 'latte'] ---> ['pastry', 'sandwich'] with a confidence of 1.0

['salad', 'latte', 'pastry'] ---> ['sandwich'] with a confidence of 1.0