Vertical representation

SID	Sequences
1	$\langle\{a, b\},\{c\},\{f, g\},\{g\},\{e\}\rangle$
2	$\langle\{a, d\},\{c\},\{b\},\{a, b, e, f\}\rangle$
3	$\langle\{a\},\{b\},\{f\},\{e\}\rangle$
4	$\langle\{b\},\{f, g\}\rangle$

a	
SID	Itemsets
1	1
2	1,4
3	1
4	

b	
SID	Itemsets
1	1
2	3,4
3	2
4	1

c	
SID	Itemsets
1	2
2	2
3	
4	

d	
SID	Itemsets
1	
2	1
3	
4	

e	
SID	Itemsets
1	5
2	4
3	4
4	

f	
SID	Itemsets
1	3
2	4
3	3
4	2

g	
SID	Itemsets
1	3,4
2	
3	
4	2

Pseudo-code

SPAM(*SDB, minsup*)

1. Scan *SDB* to create $V(SDB)$ and identify F_1, the list of frequent items.
2. **FOR** each item s $\in F_1$,
3. **SEARCH**($\langle s \rangle$, F_1, $\{e \in F_1 \mid e \succ_{lex} s\}$, *minsup*).

SEARCH(*pat*, S_n, I_n, *minsup*)

1. Output pattern *pat*.
2. $S_{temp} := I_{temp} := \emptyset$
3. **FOR** each item $j \in S_n$,
4. **IF** the s-extension of *pat* is frequent **THEN** $S_{temp} := S_{temp} \cup \{i\}$.
5. **FOR** each item $j \in S_{temp}$,
6. **SEARCH**(the s-extension of *pat* with *j*, S_{temp}, $\{e \in S_{temp} \mid e \succ_{lex} j\}$, *minsup*).
7. **FOR** each item $j \in I_n$,
8. **IF** the i-extension of *pat* is frequent **THEN** $I_{temp} := I_{temp} \cup \{i\}$.
9. **FOR** each item $j \in I_{temp}$,
10. **SEARCH**(i-extension of *pat* with *j*, S_{temp}, $\{e \in I_{temp} \mid e \succ_{lex} j\}$, *minsup*).

With pat={a} and s = b:

- S-extension: {a},{a}
- I-extenstion: {a,b}