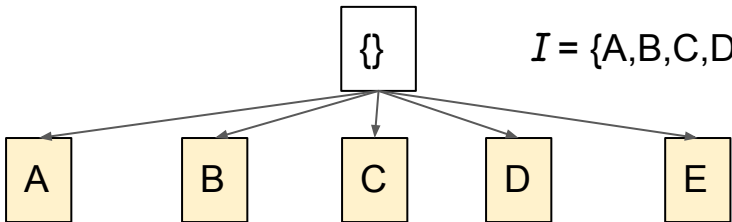

 must test

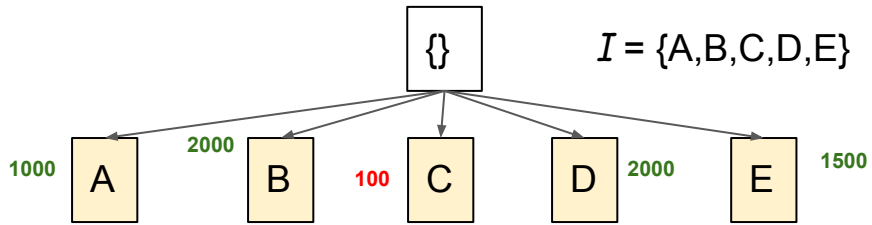


$I = \{A, B, C, D, E\}$

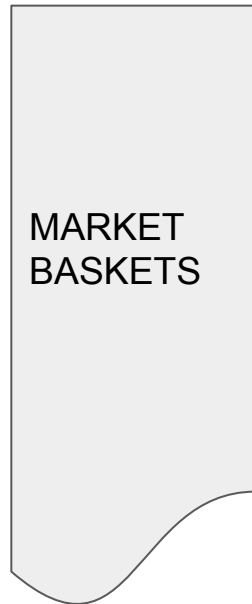
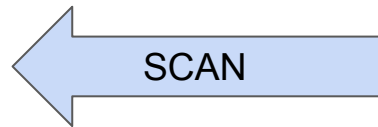
minSup = 500



 must test







minSup = 500



...



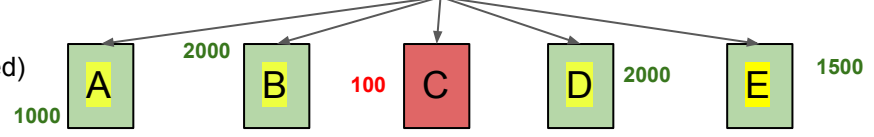
-  must test
-  frequent itemset
-  not frequent itemset (tested)

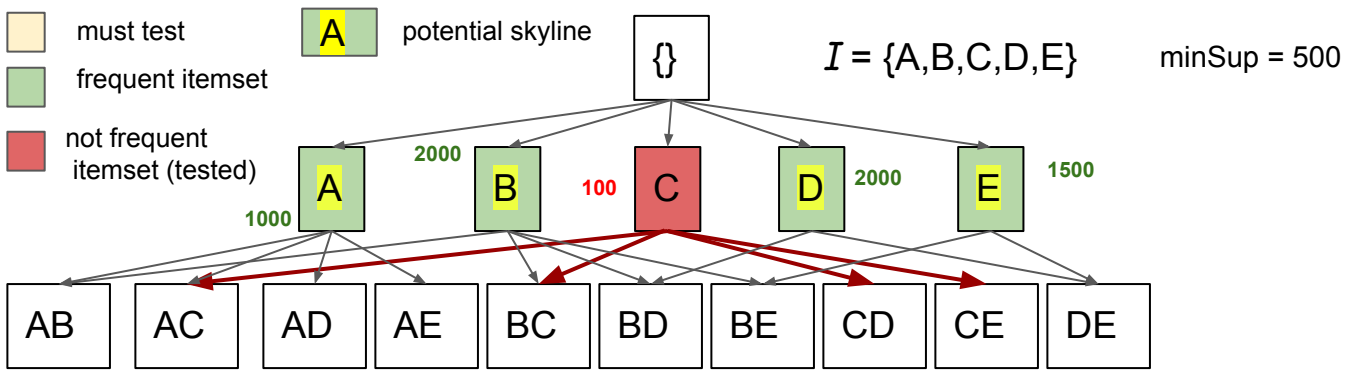
 potential skyline

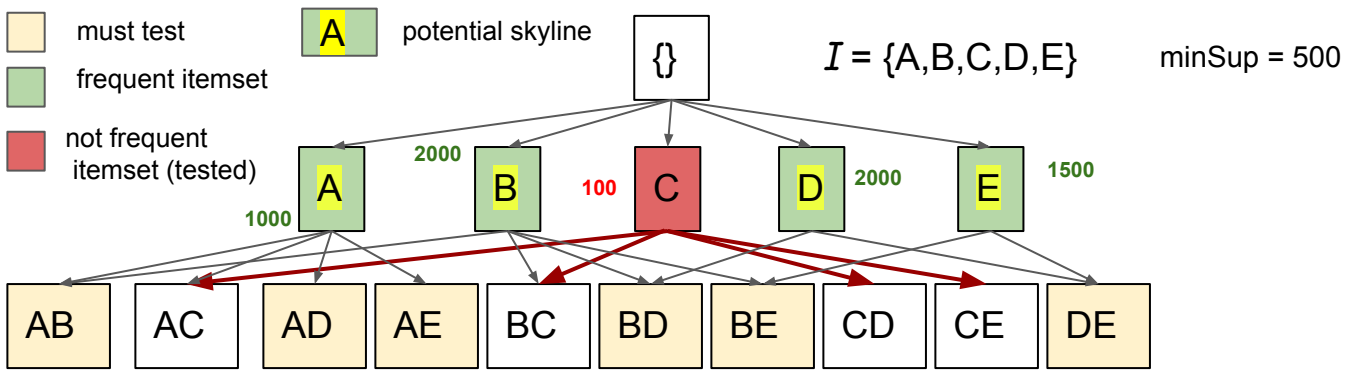


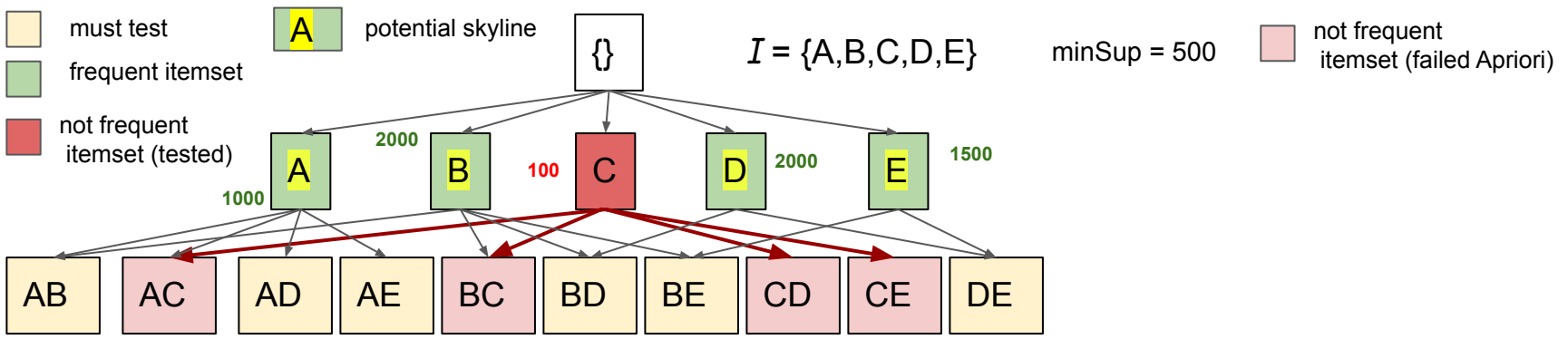
$I = \{A,B,C,D,E\}$

minSup = 500





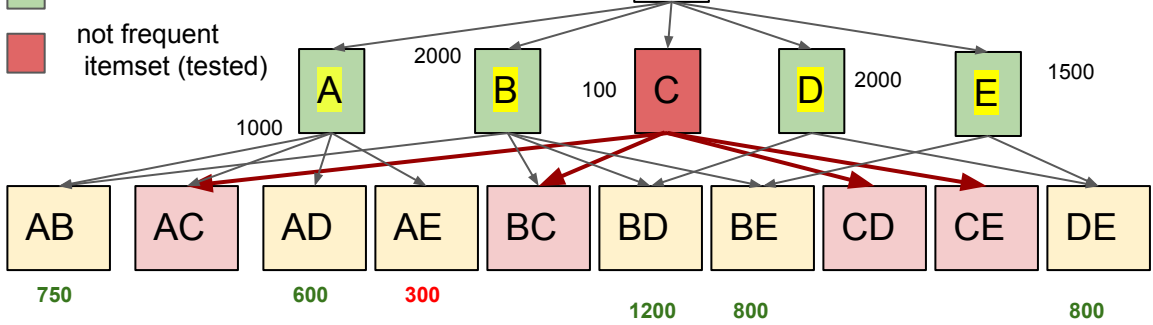




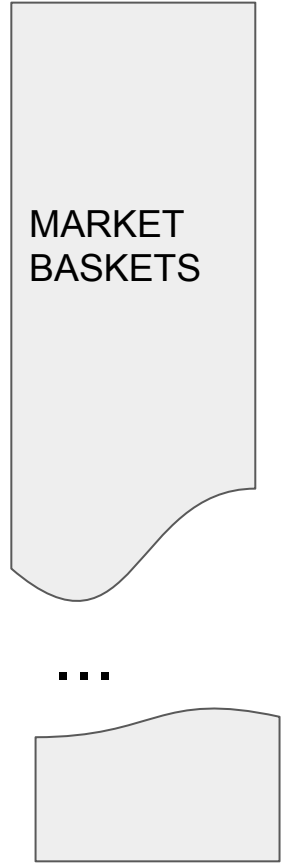
must test  
 frequent itemset  
 not frequent itemset (tested)

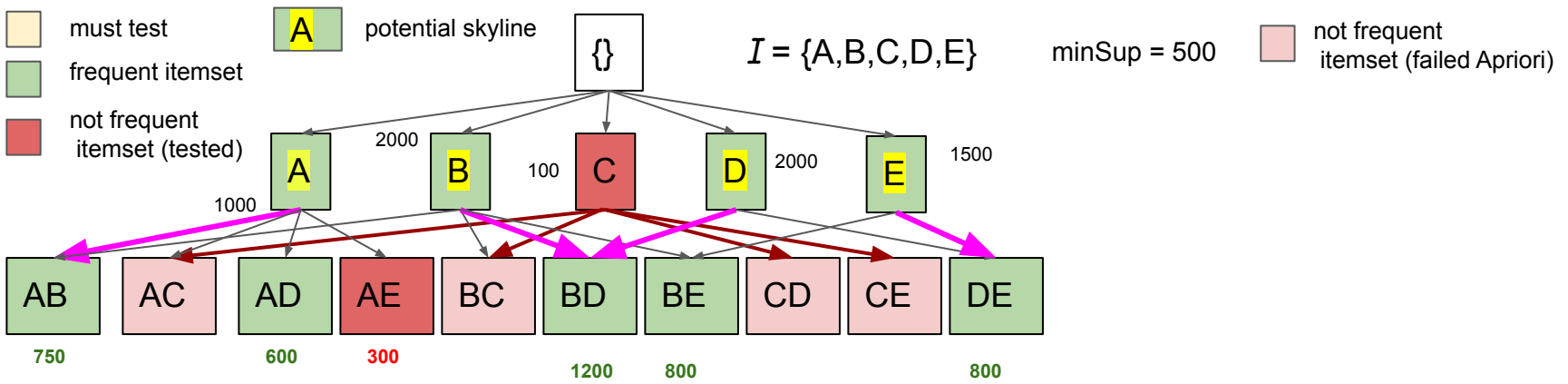
**A** potential skyline  
 **B** potential skyline  
 **C** not frequent itemset (failed Apriori)  
 **D** potential skyline  
 **E** frequent itemset

$I = \{A, B, C, D, E\}$     minSup = 500    not frequent itemset (failed Apriori)

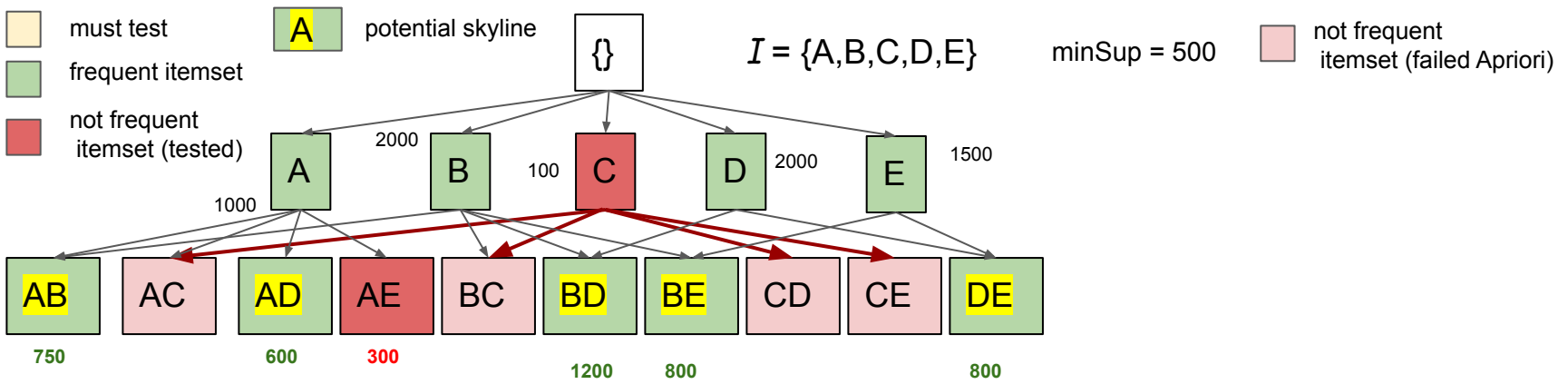


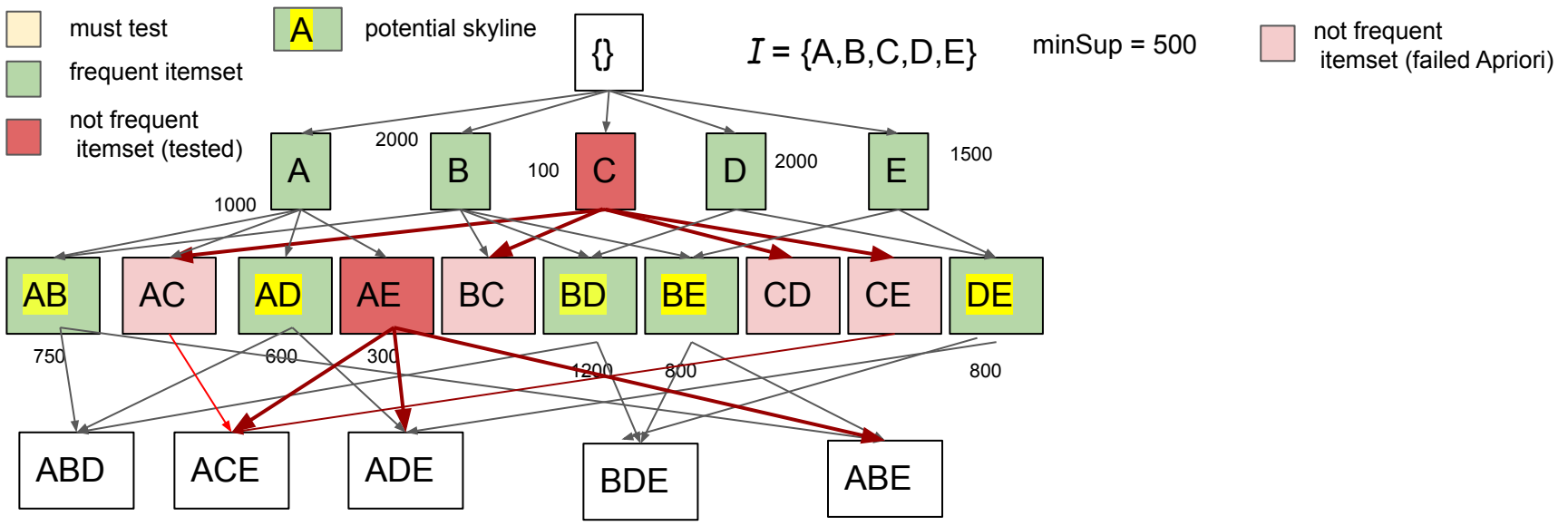
← SCAN

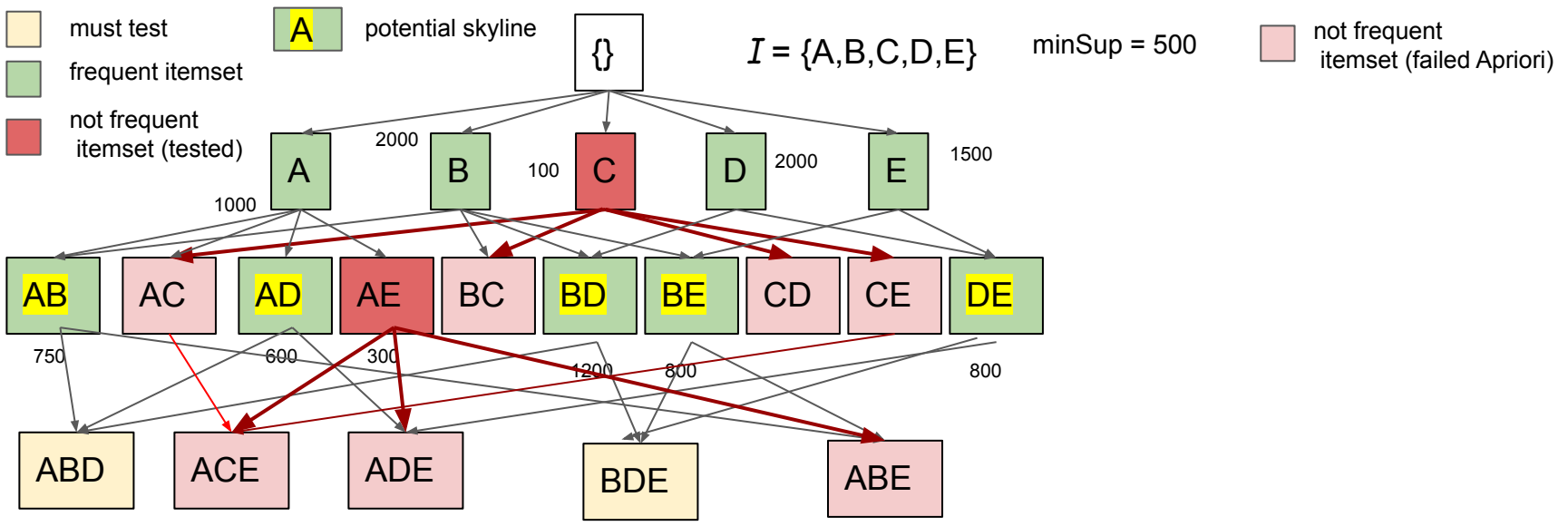






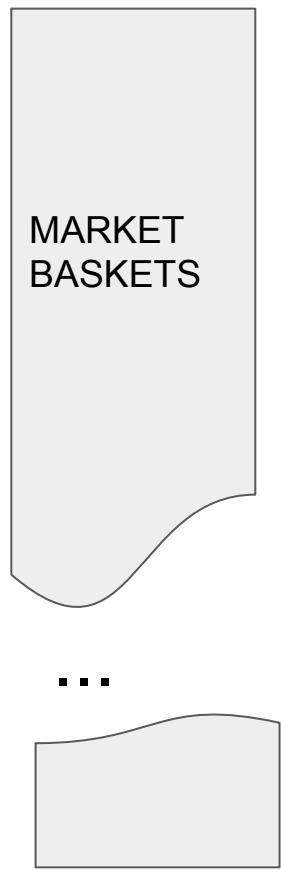
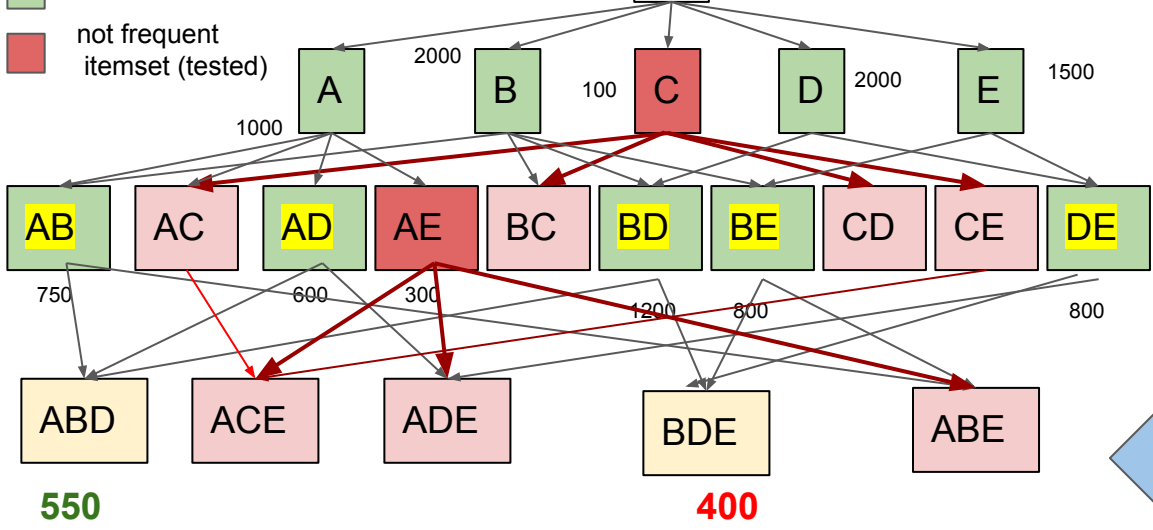




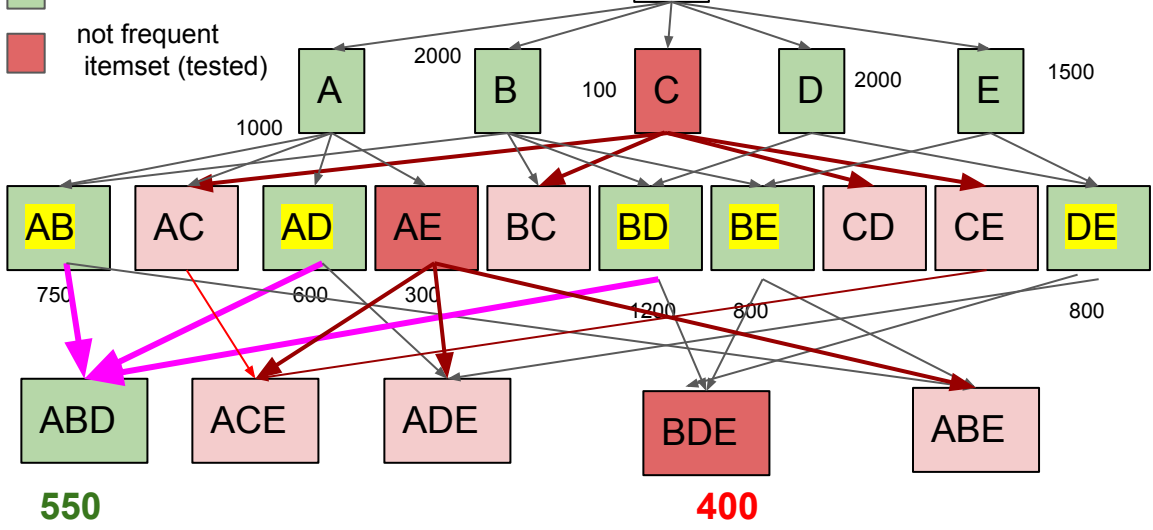


must test  
 frequent itemset  
 not frequent itemset (tested)

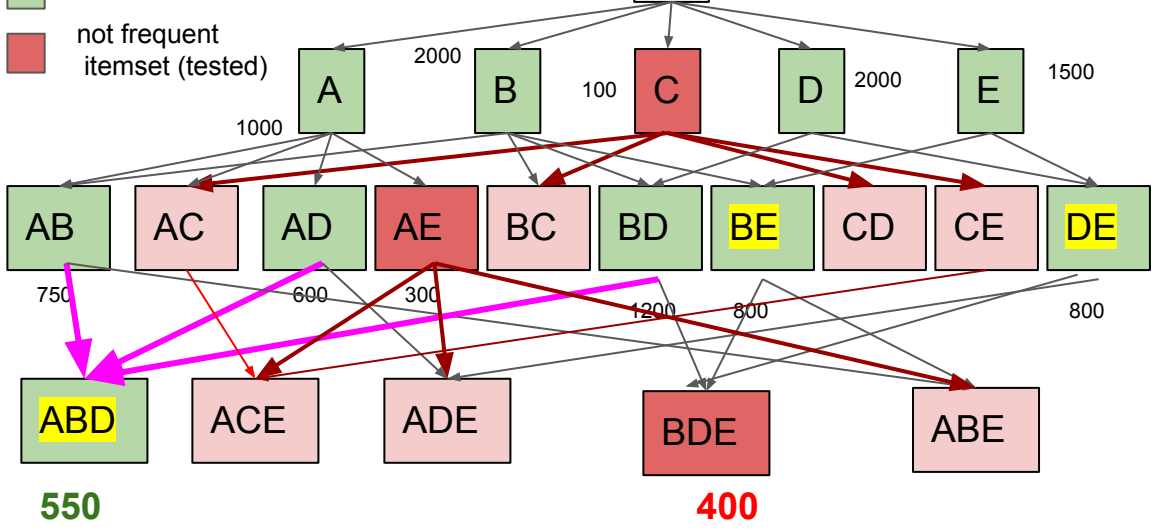
**A** potential skyline  
 $I = \{A, B, C, D, E\}$  minSup = 500  
 not frequent itemset (failed Apriori)

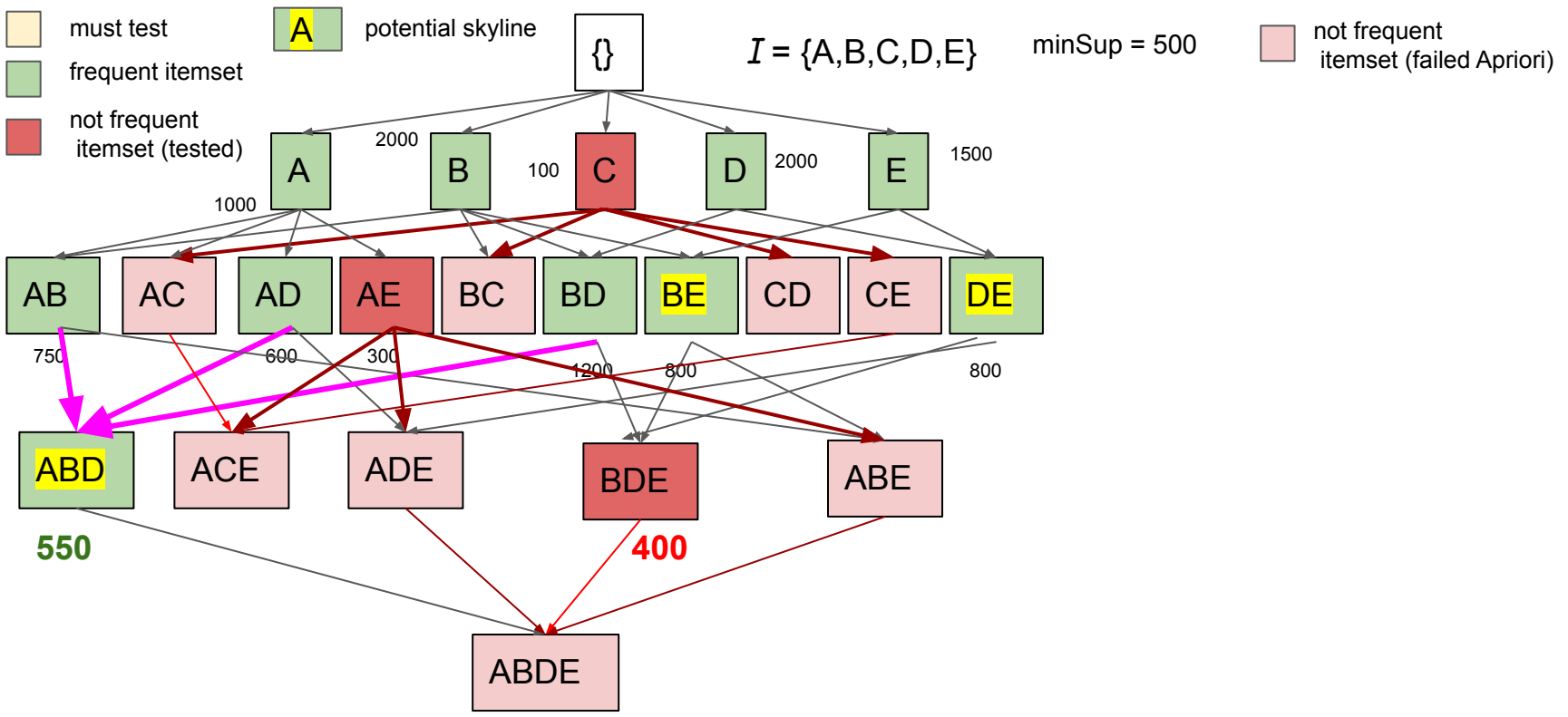


must test    
  potential skyline **A**    
   $\{\}$     
  $I = \{A, B, C, D, E\}$     
 minSup = 500    
  not frequent itemset (failed Apriori)



must test    
 A potential skyline    
 { }  $I = \{A, B, C, D, E\}$     
 minSup = 500    
  not frequent itemset (failed Apriori)





**Skyline: {BE, DE, ABD}**

# Finding Association Rules



{A,B,C,D} - Frequent Itemset

## {A,B,C,D} - Frequent Itemset

Step 1: Find all rules with one item on the right:

ABC -> D

$$\text{confidence}(ABC \rightarrow D) = \frac{\text{support}(ABCD)}{\text{support}(ABC)}$$

ABD -> C

ACD -> B

BCD -> A

# {A,B,C,D} - Frequent Itemset

Step 1: Find all rules with one item on the right:

**ABC -> D**

$$\text{confidence}(ABC \rightarrow D) = \frac{\text{support}(ABCD)}{\text{support}(ABC)}$$

**ABD -> C**

**ACD -> B**

Rules = Right hand sides (given a specific itemset)

**BCD -> A**

Apriori principle can be applied again!

BD, BC, AB are not going to be asserted!