

Sesión 4.1: Tree Directory Methods

CS3102 EDA

Índice

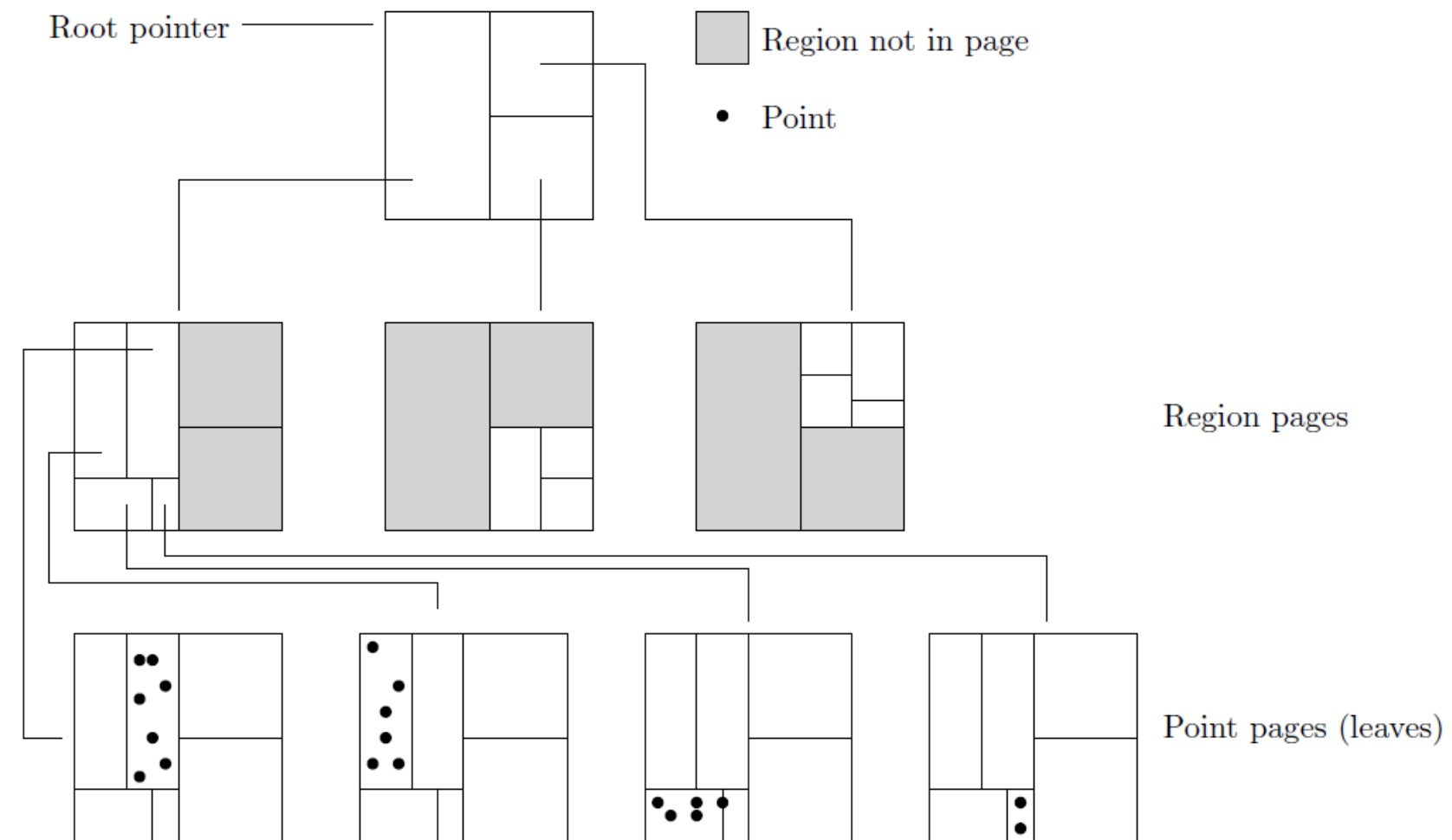
1. K-d-B-Tree
2. LSD Tree
3. hB Tree



1. K-d-B Tree

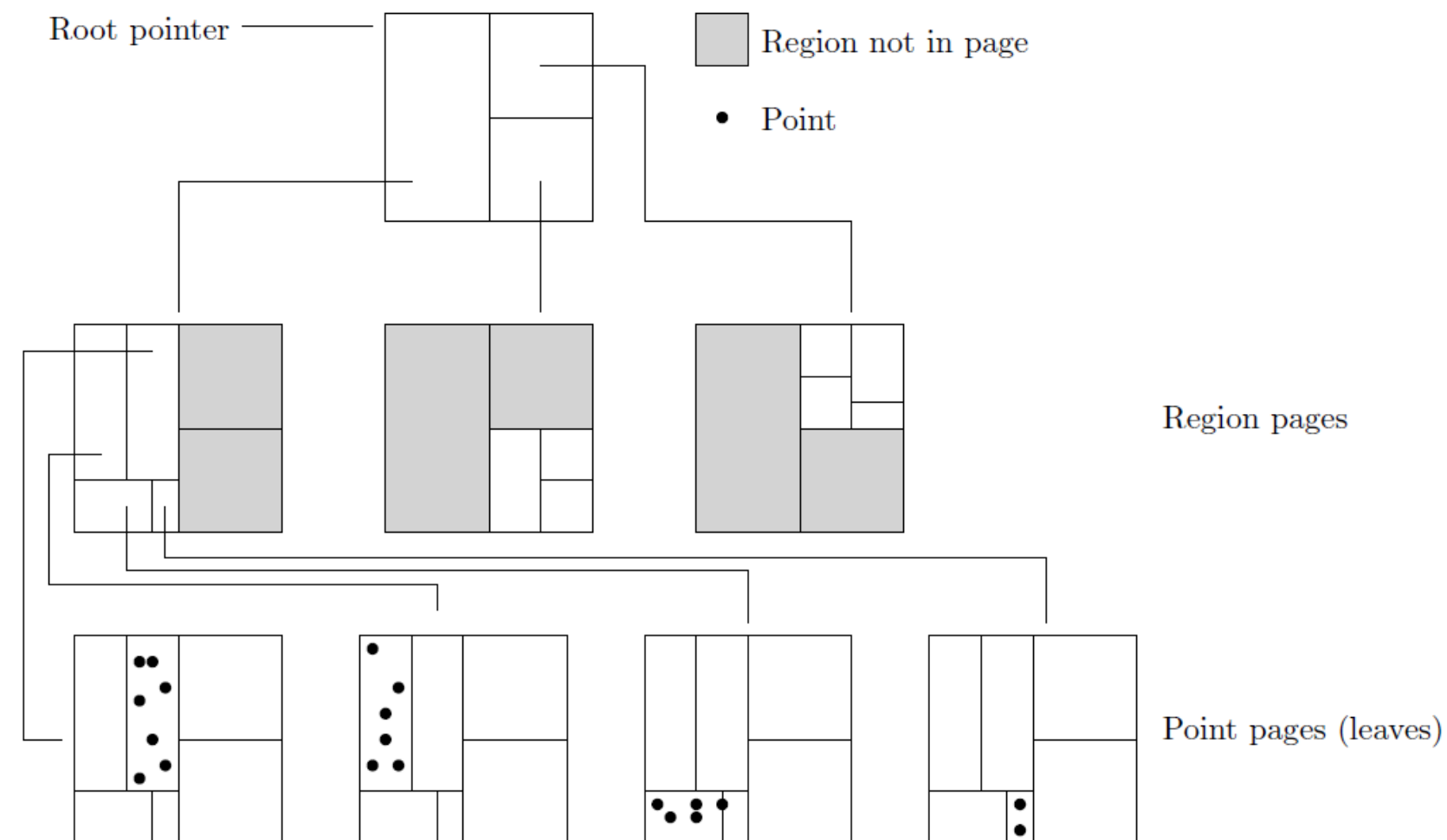
K-d-B Tree

(k-dimensional B-tree)



K-d-B Tree

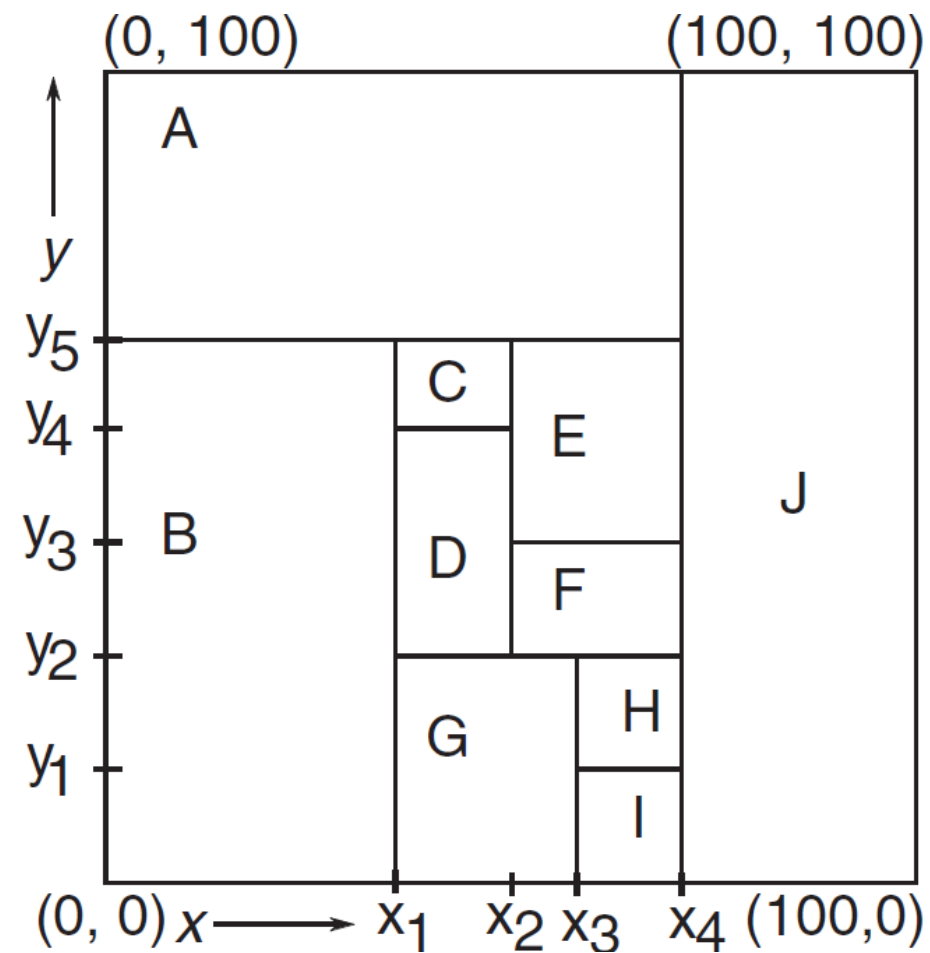
(k-dimensional B-tree)



- Todos los datos están en los nodos hoja.
- No podemos garantizar que cada *bucket* del k-d-B-tree esté lleno al 50%

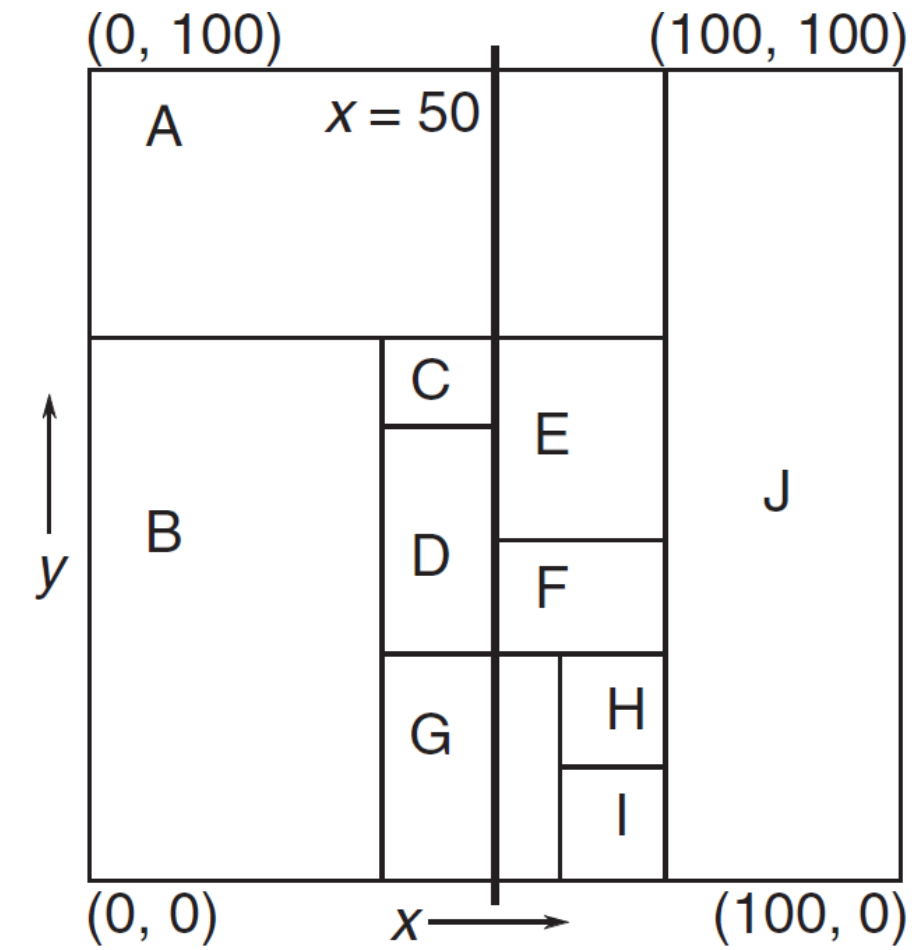
K-d-B Tree

(k-dimensional B-tree)



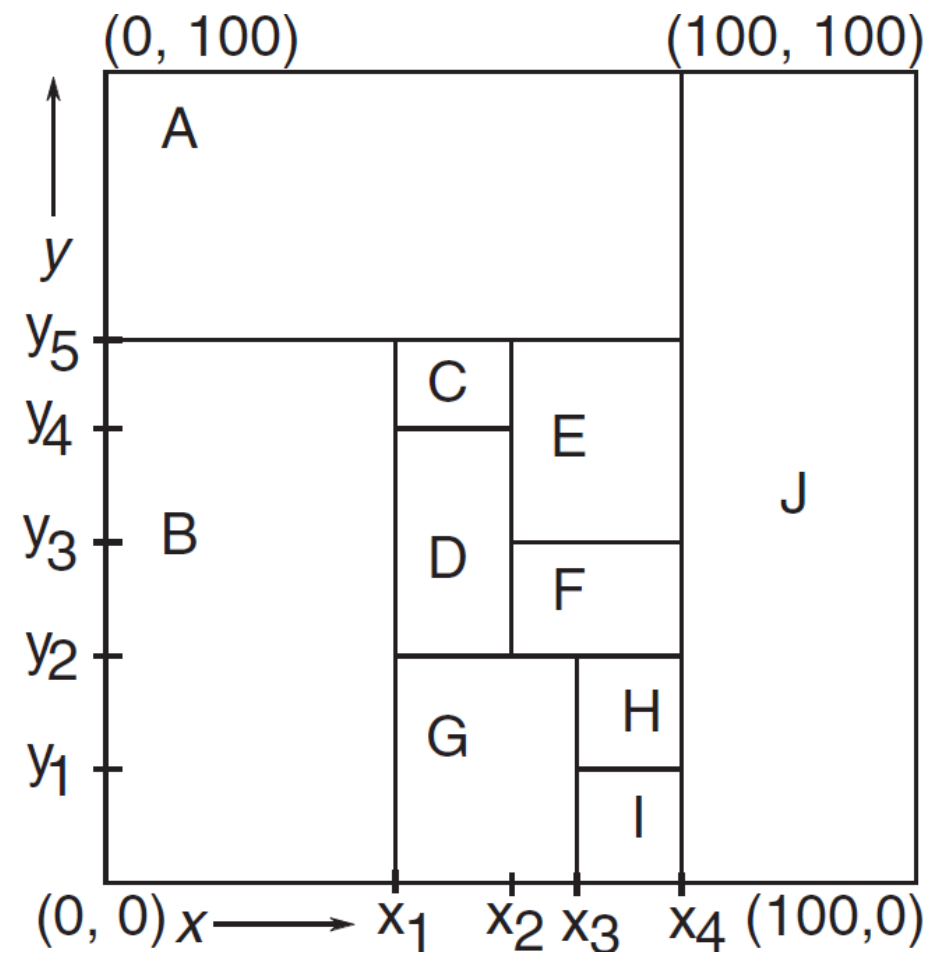
Desbordamiento del *region page*

Solución 1:



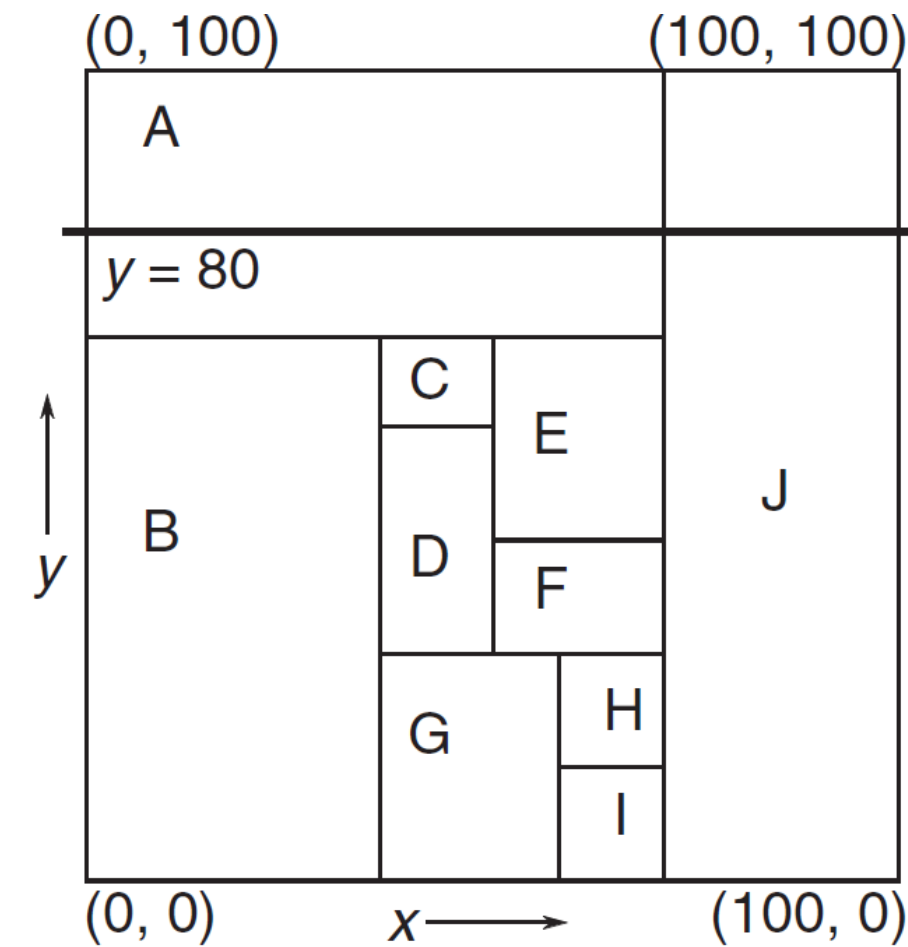
La división de propaga hacia abajo

K-d-B Tree



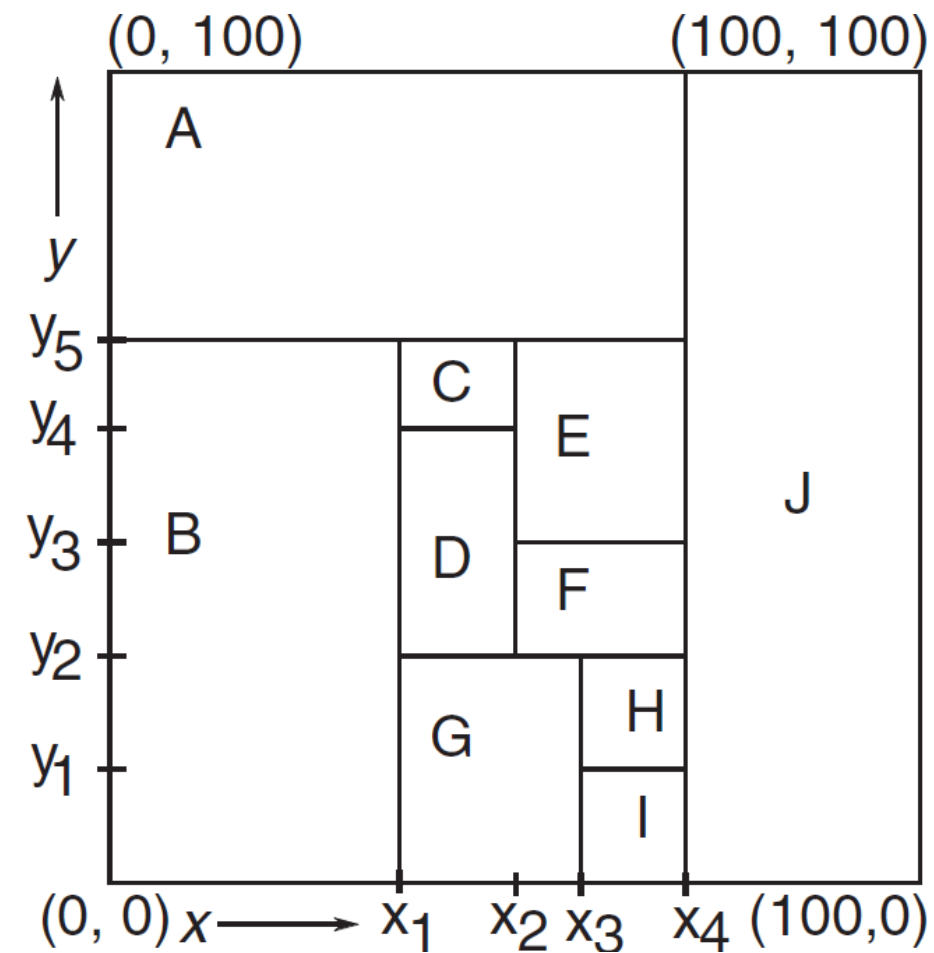
Desbordamiento del *region page*

Solución 2:



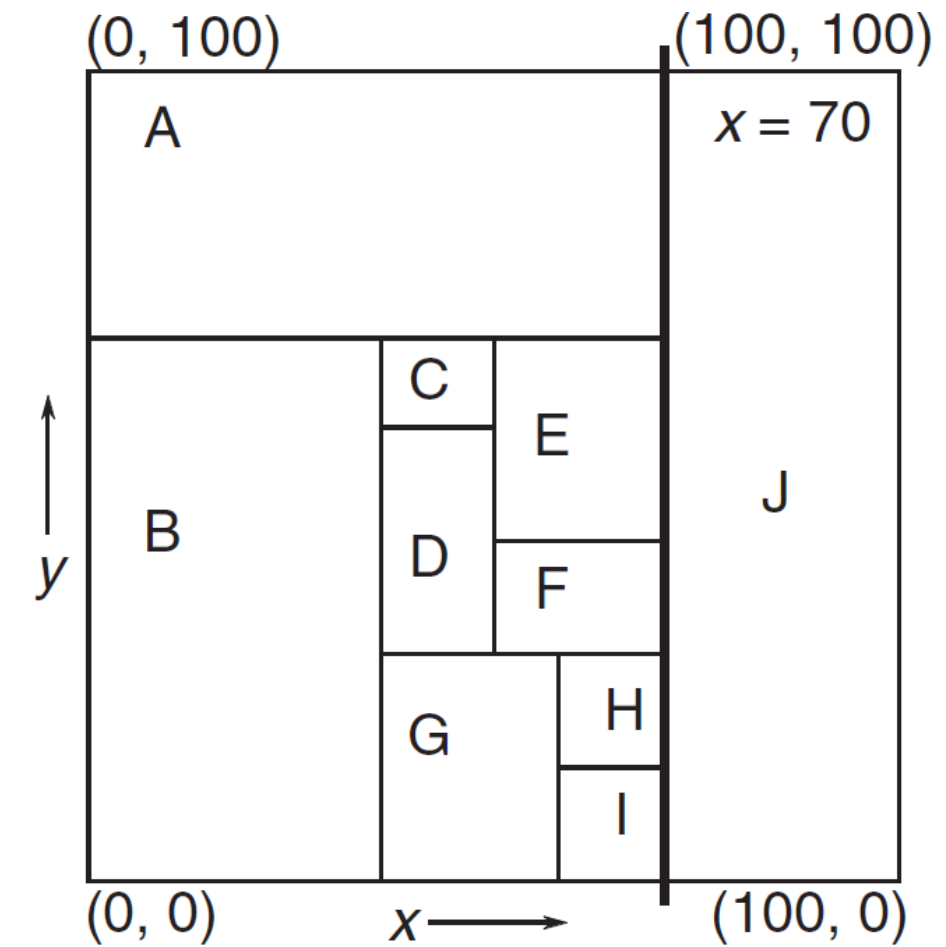
El desborde se mantiene

K-d-B Tree



Desbordamiento del *region page*

Solución 3:



Sub-uso del *region page*.

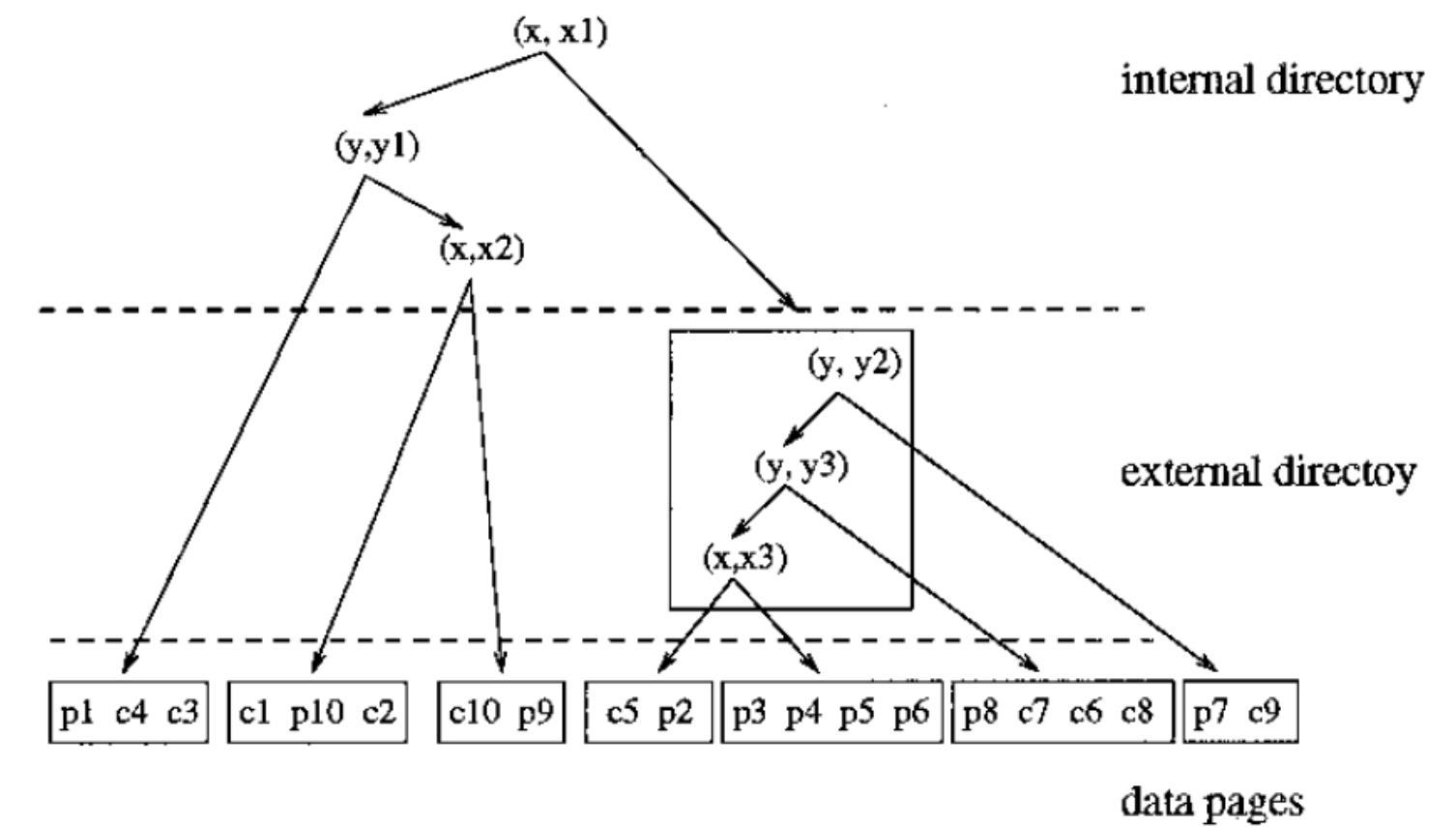
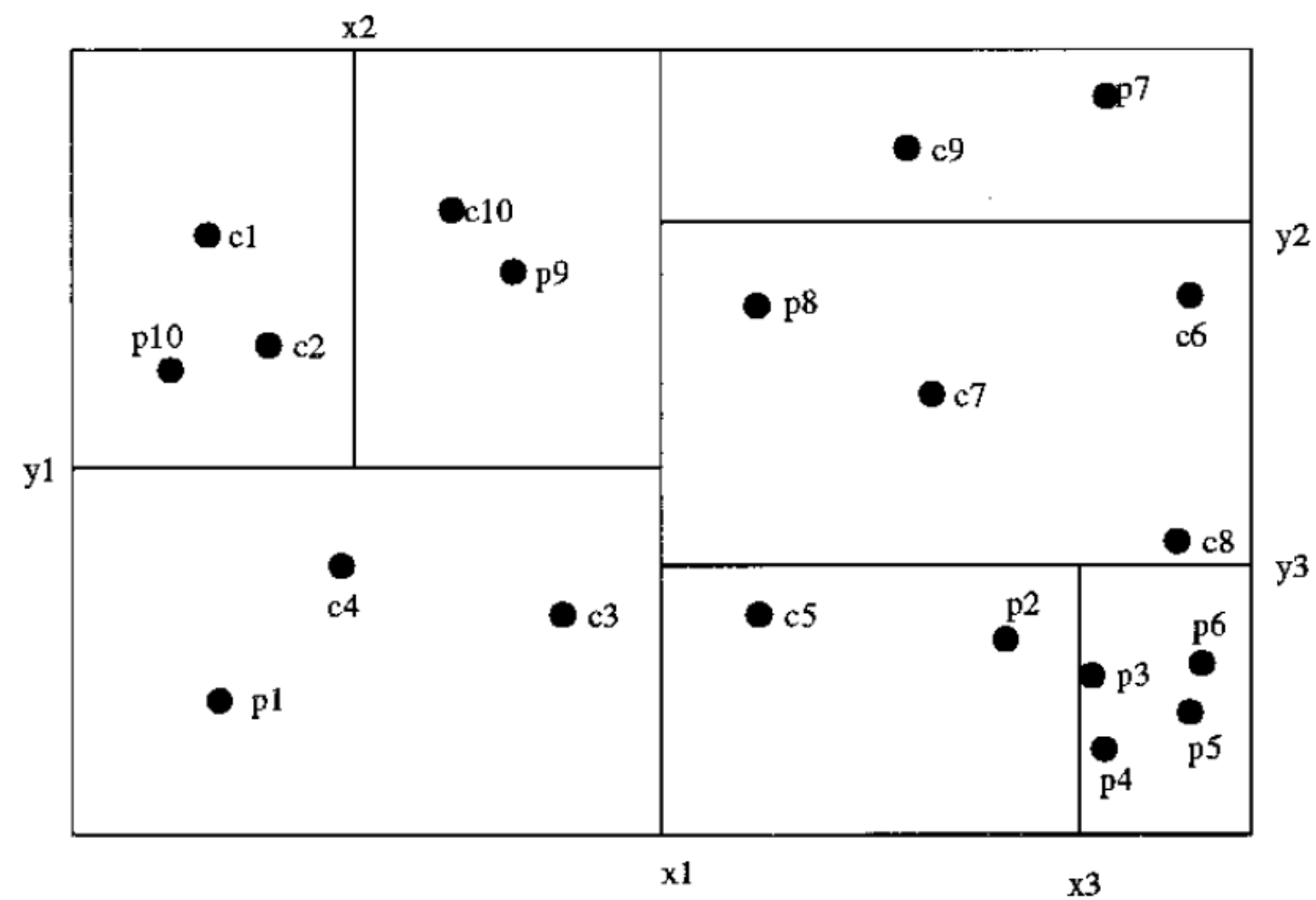
K-d-B *Tree*

Entonces, que algoritmo podríamos utilizar?

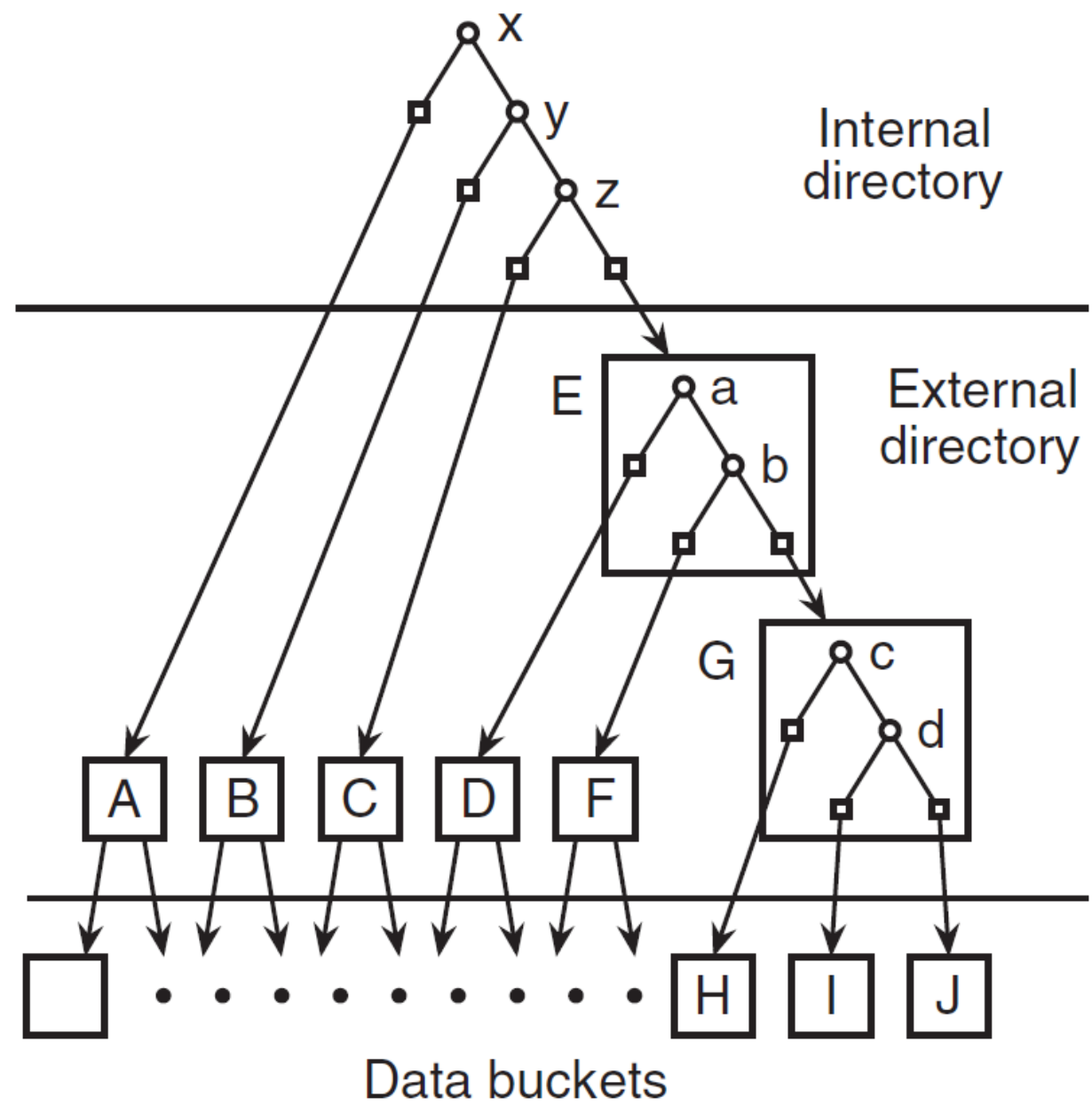
2. LSD Tree

LSD Tree

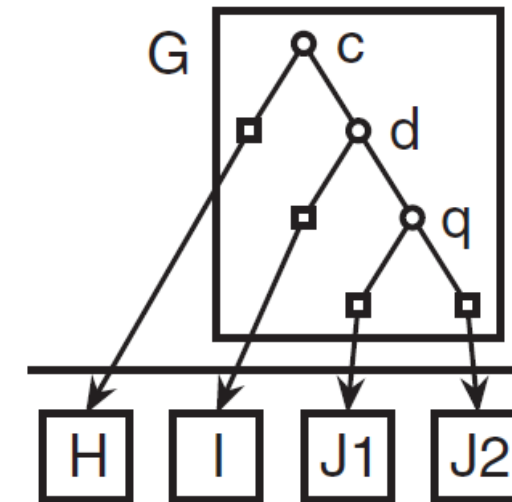
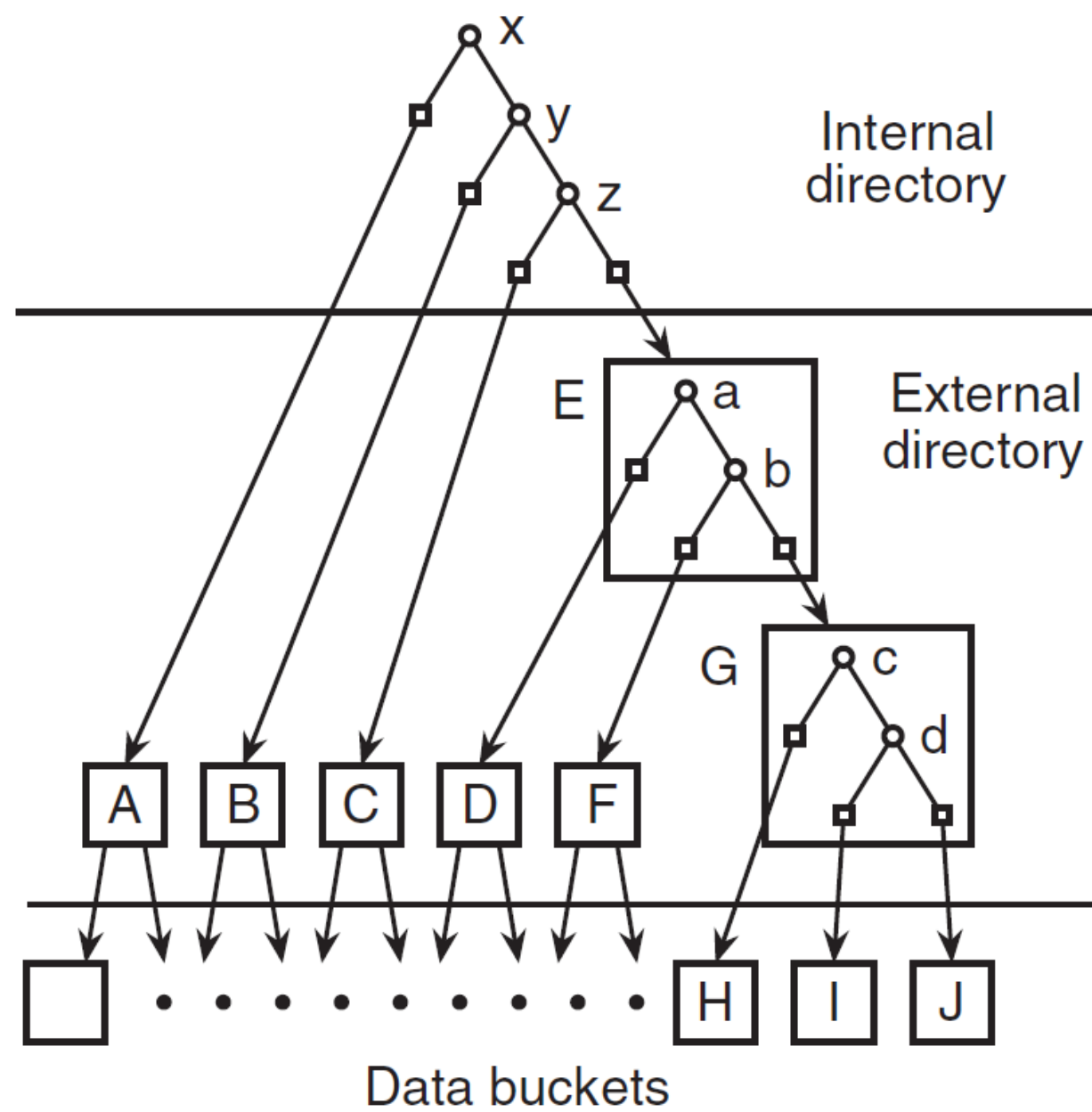
(Local Split Decision tree)



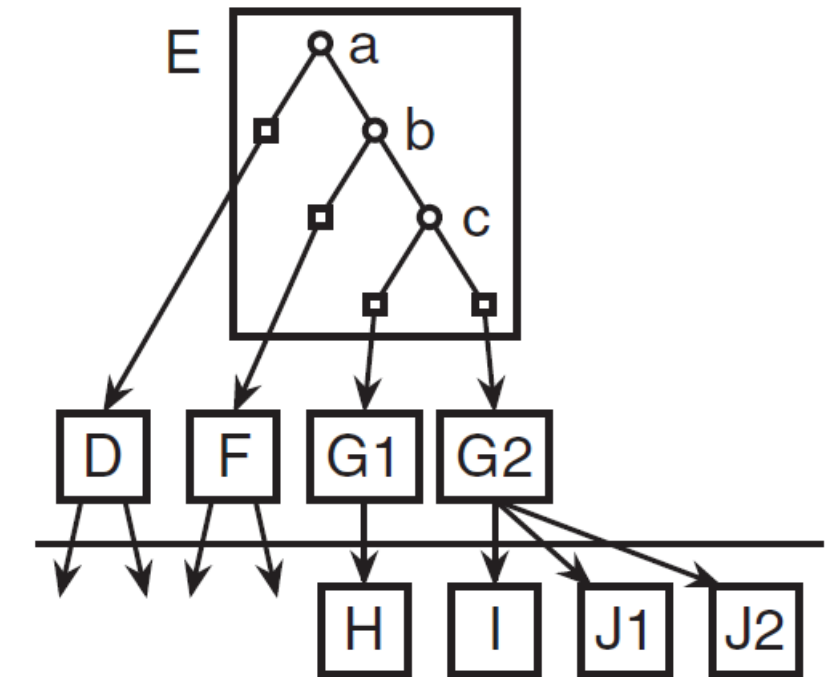
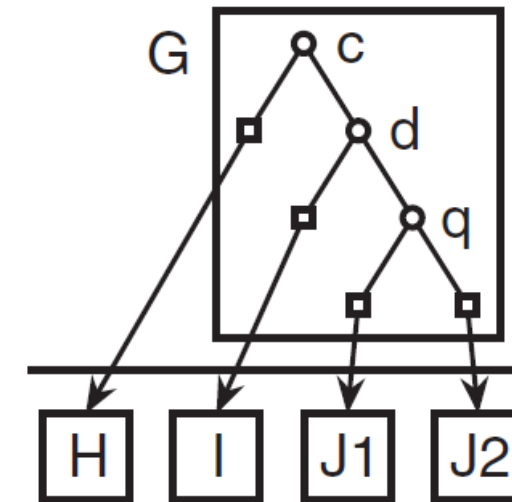
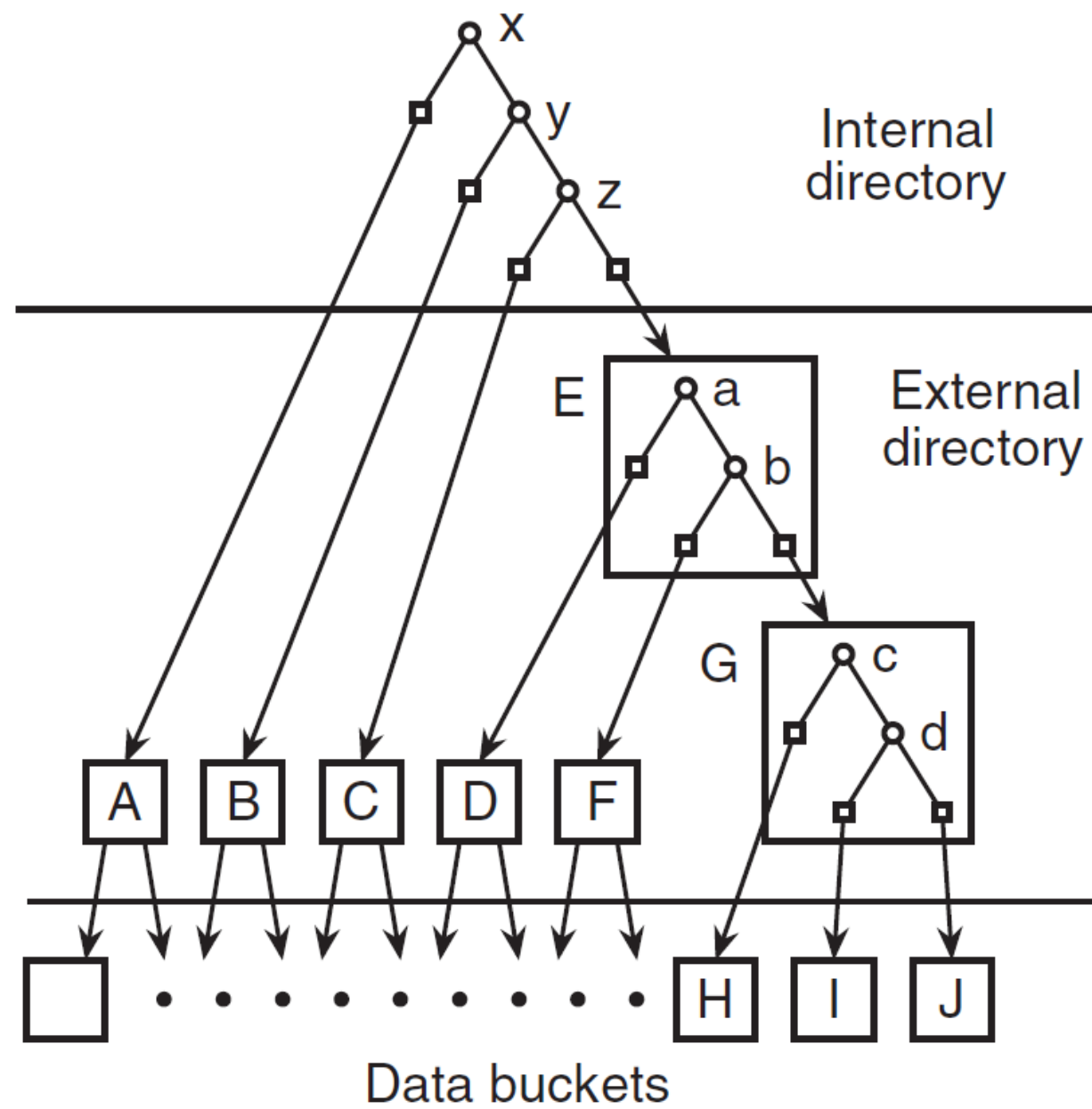
LSD Tree



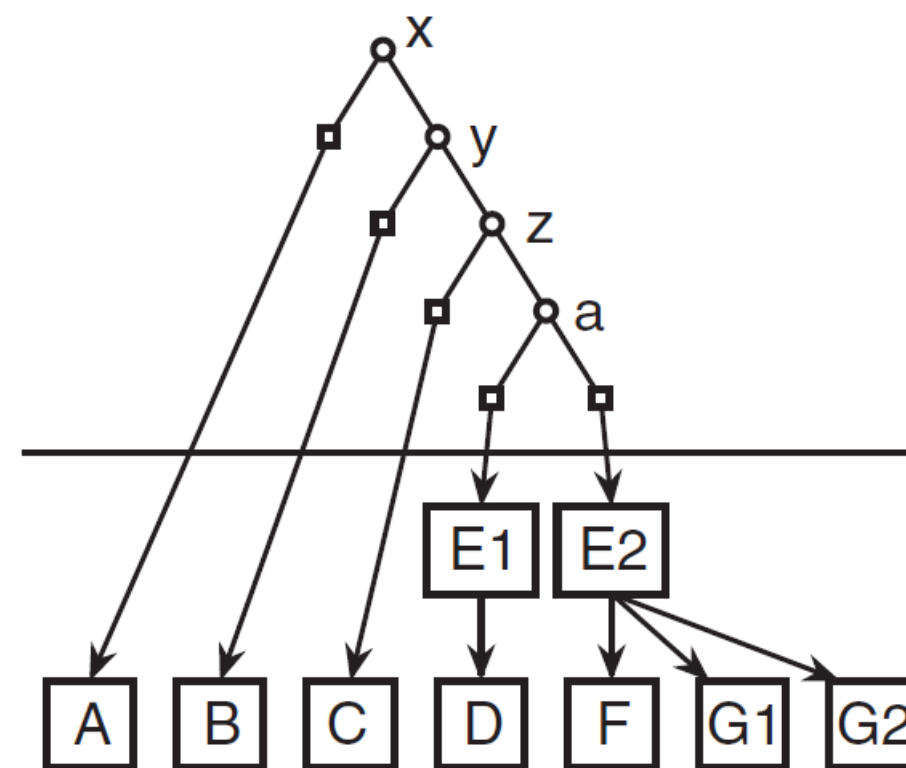
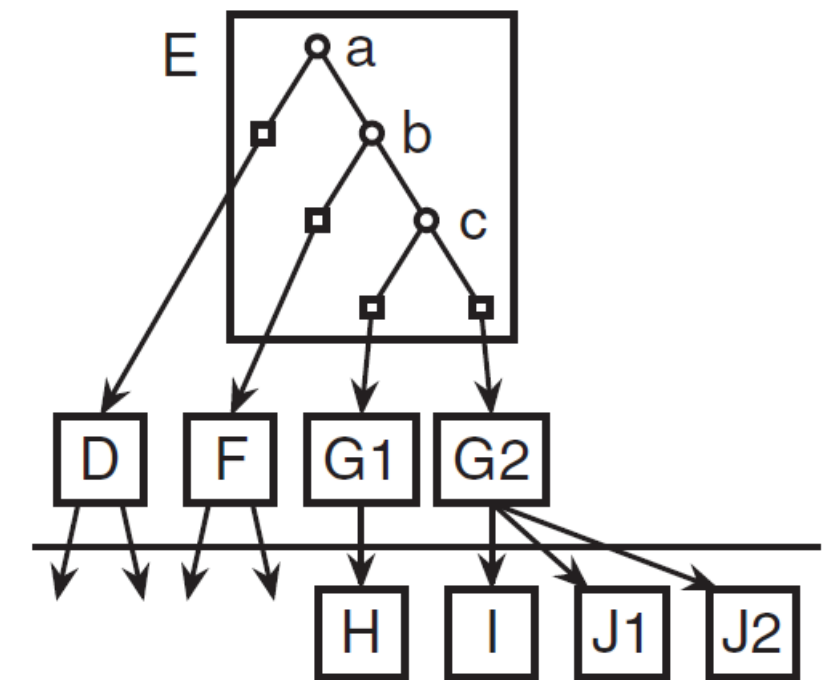
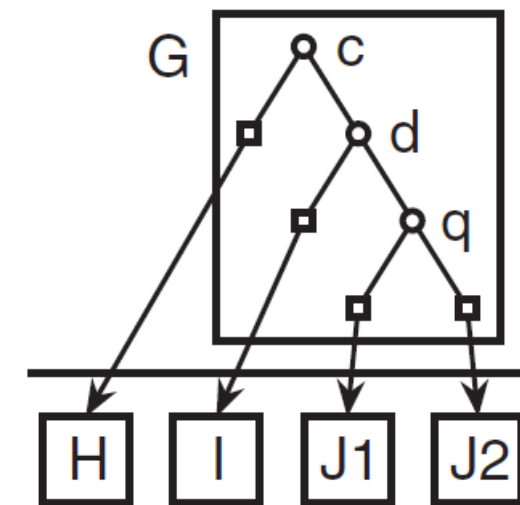
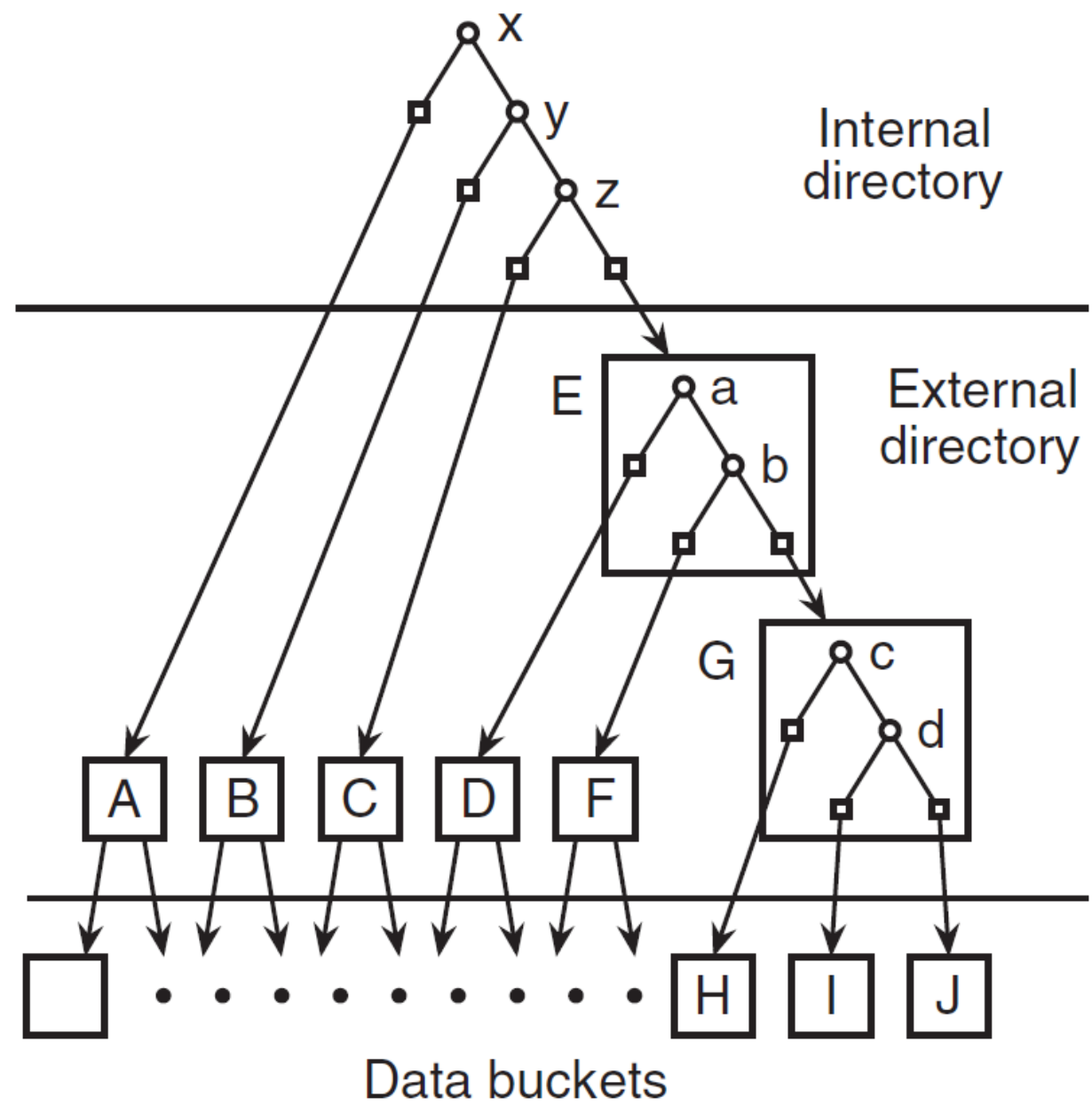
LSD Tree



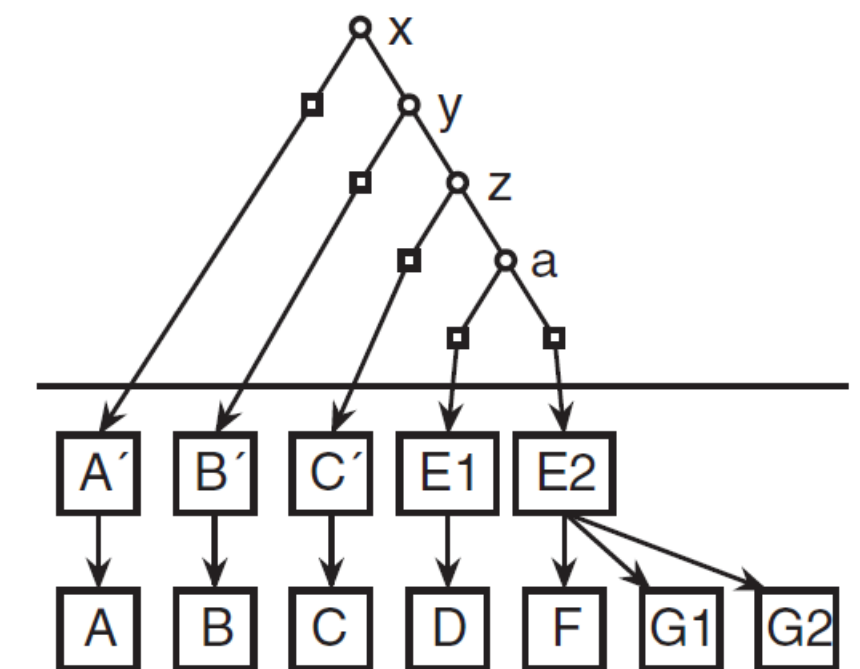
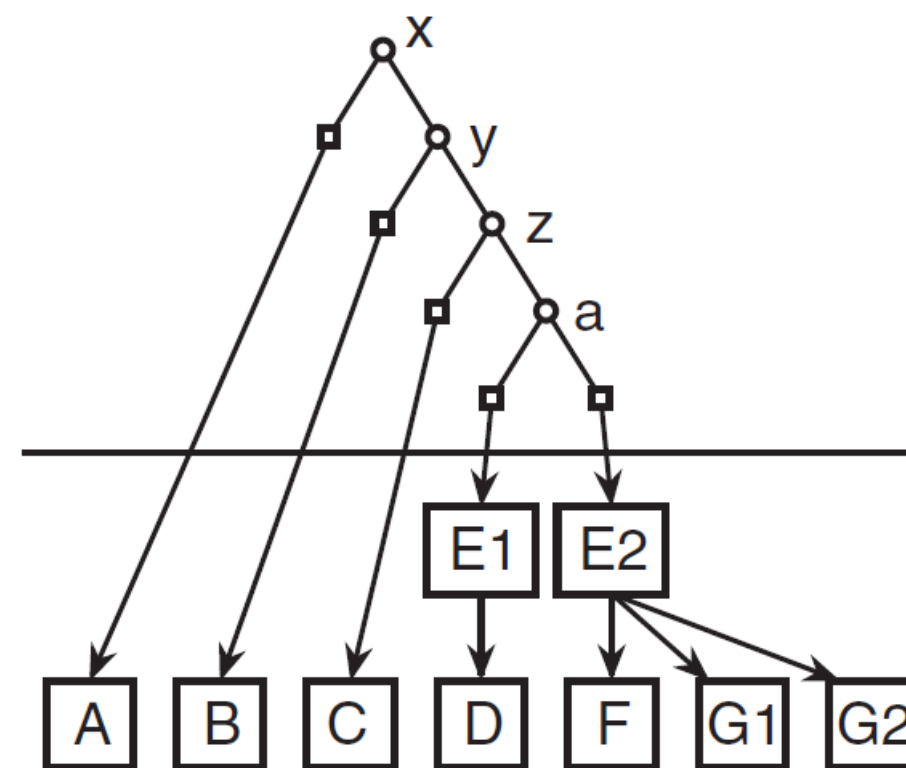
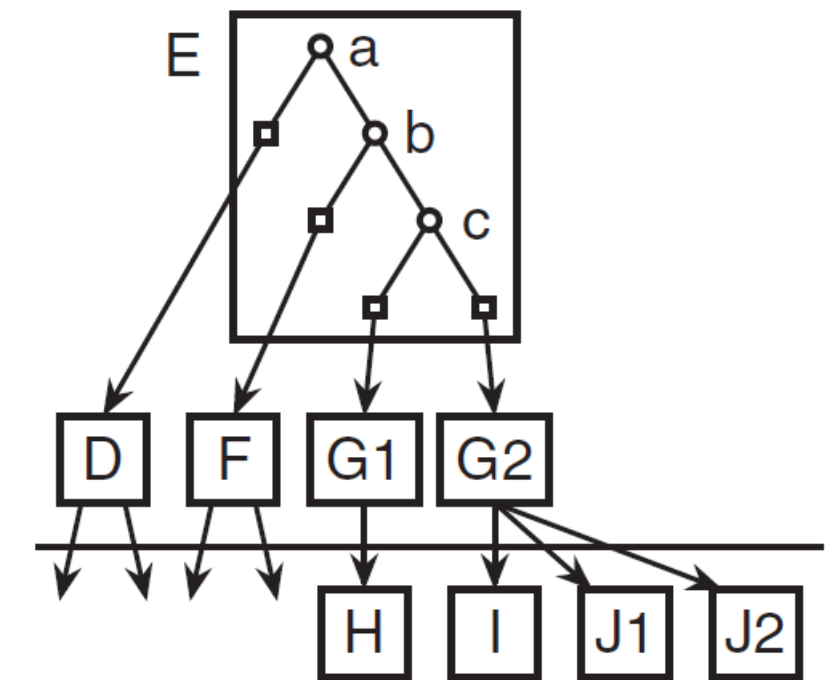
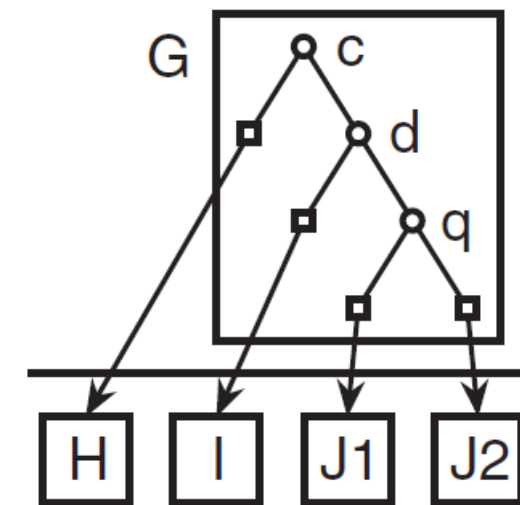
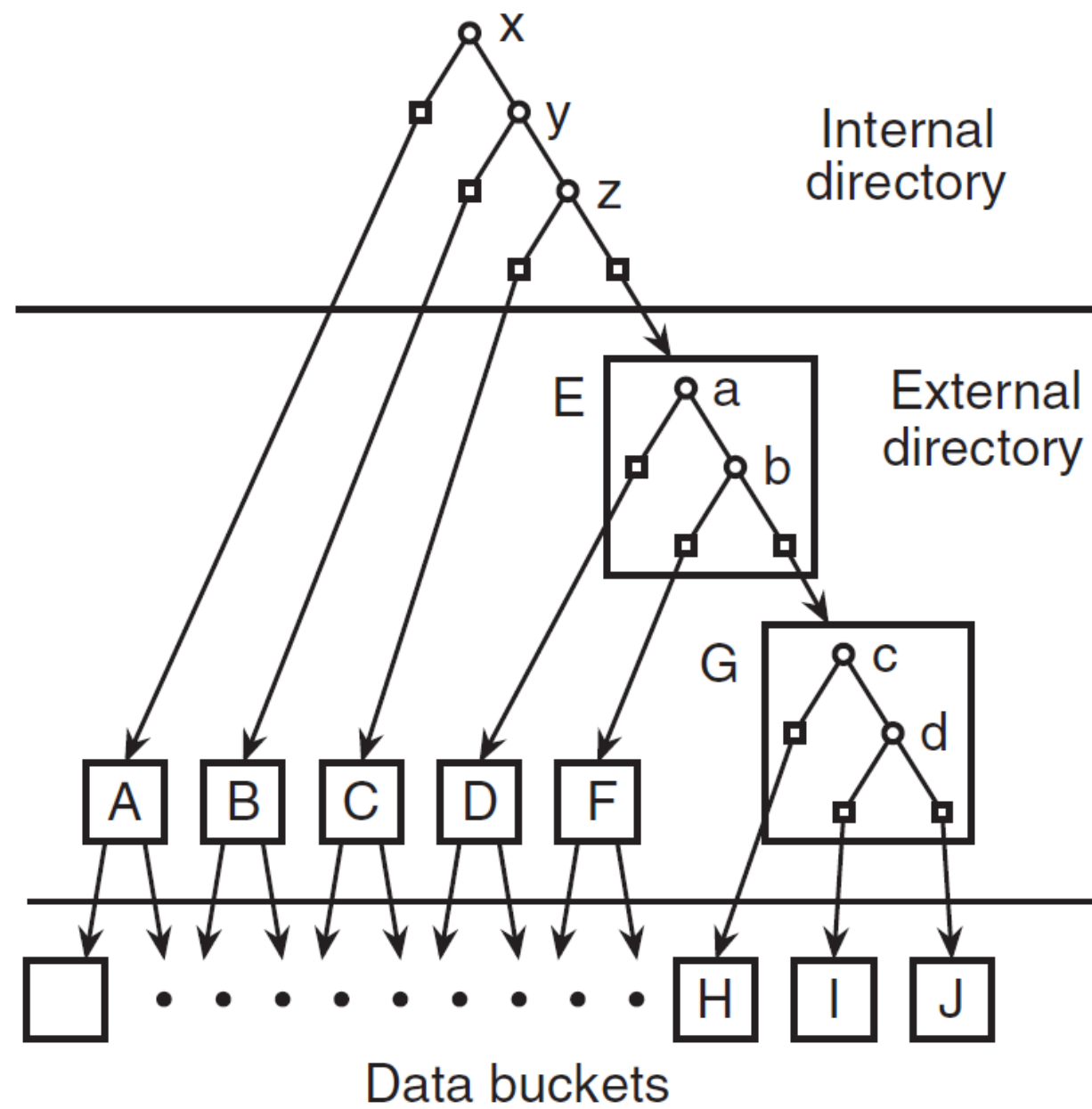
LSD Tree



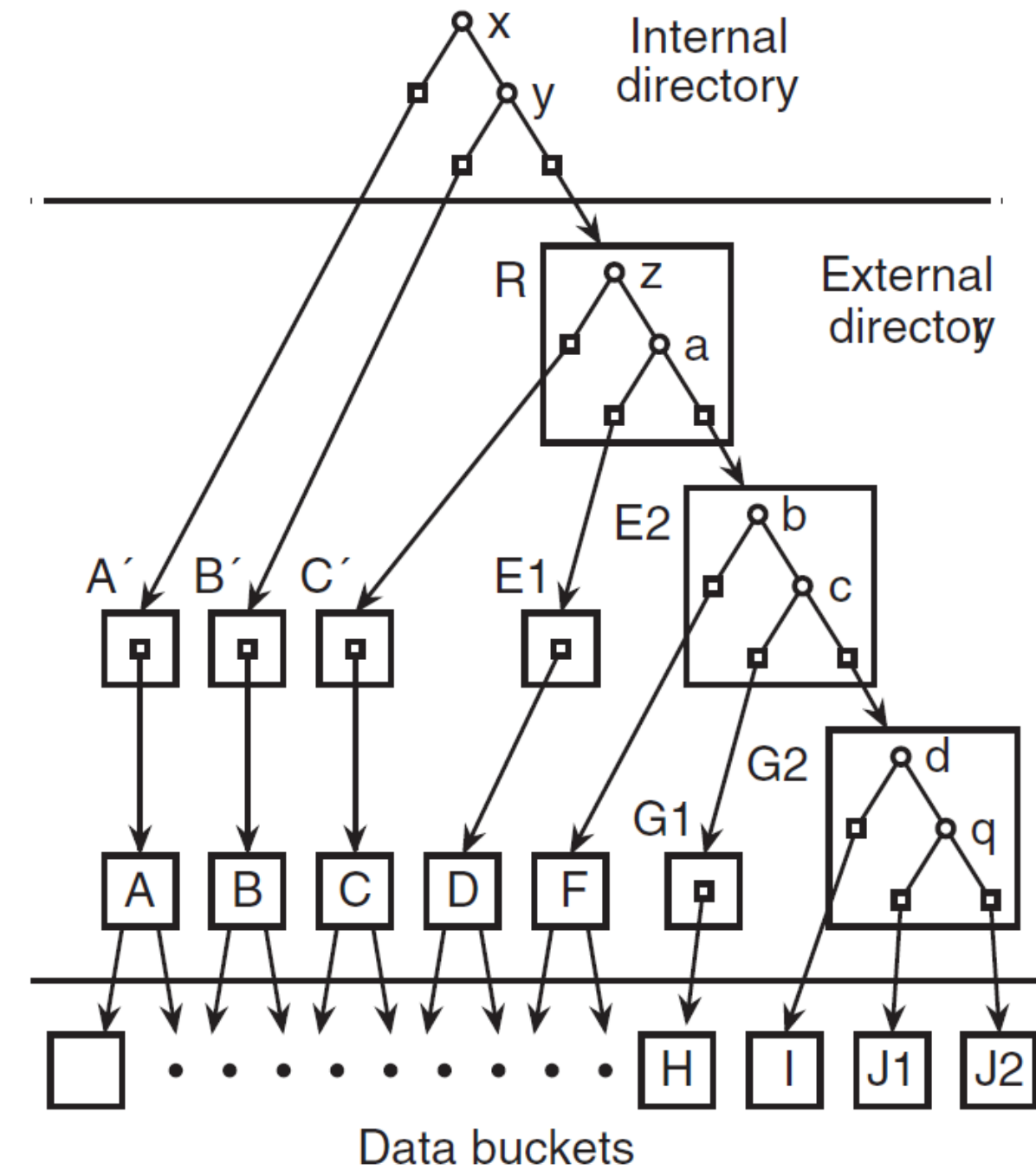
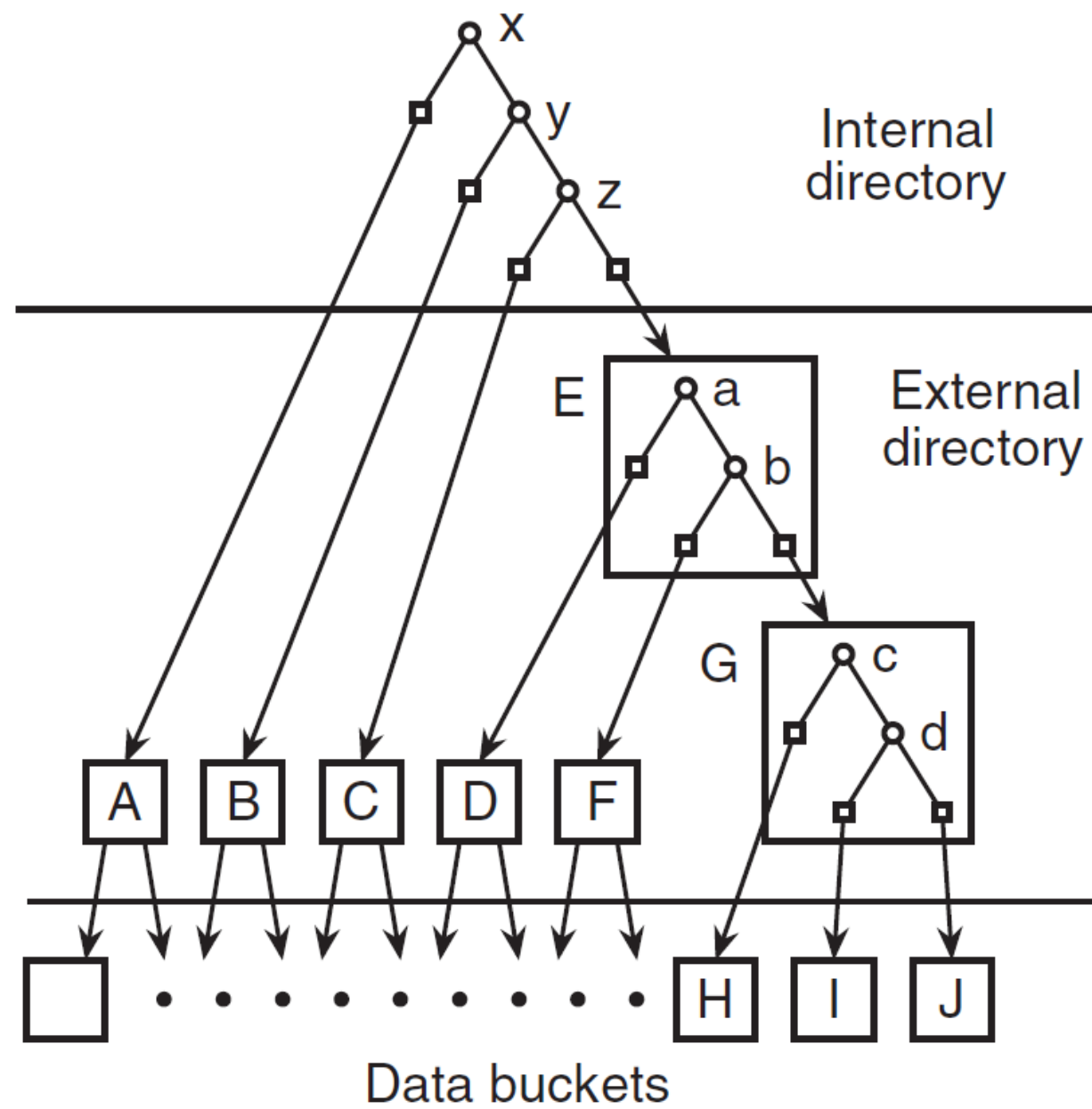
LSD Tree



LSD Tree



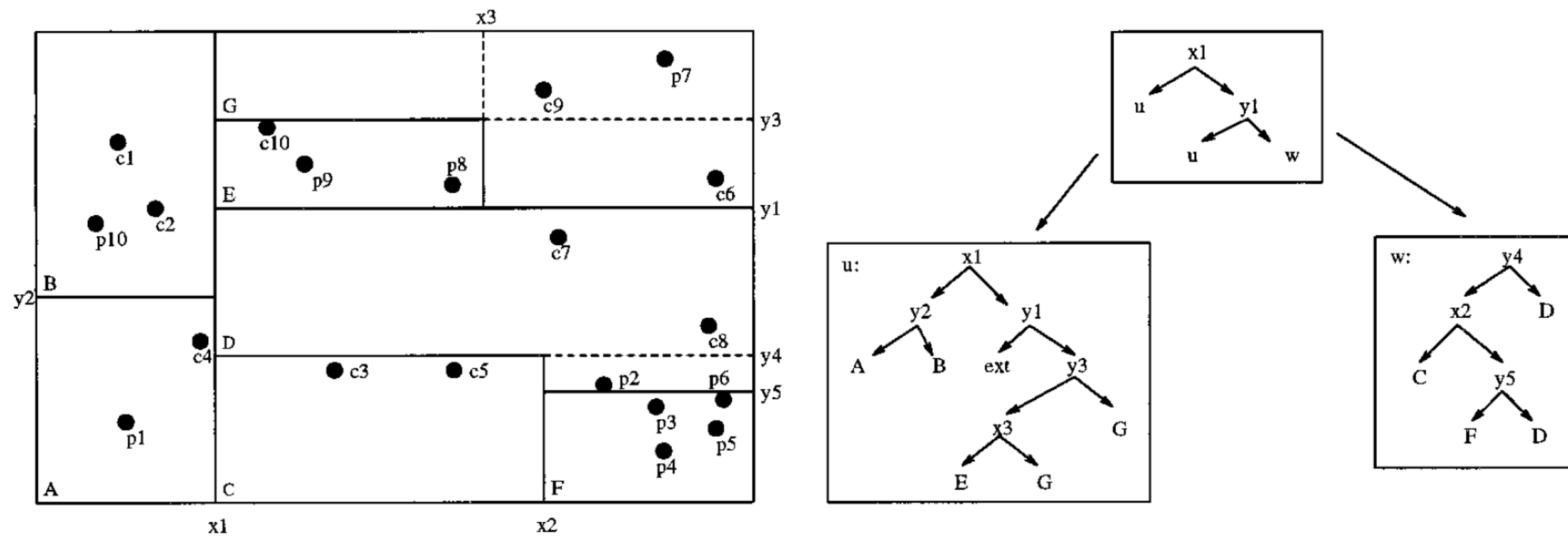
LSD Tree



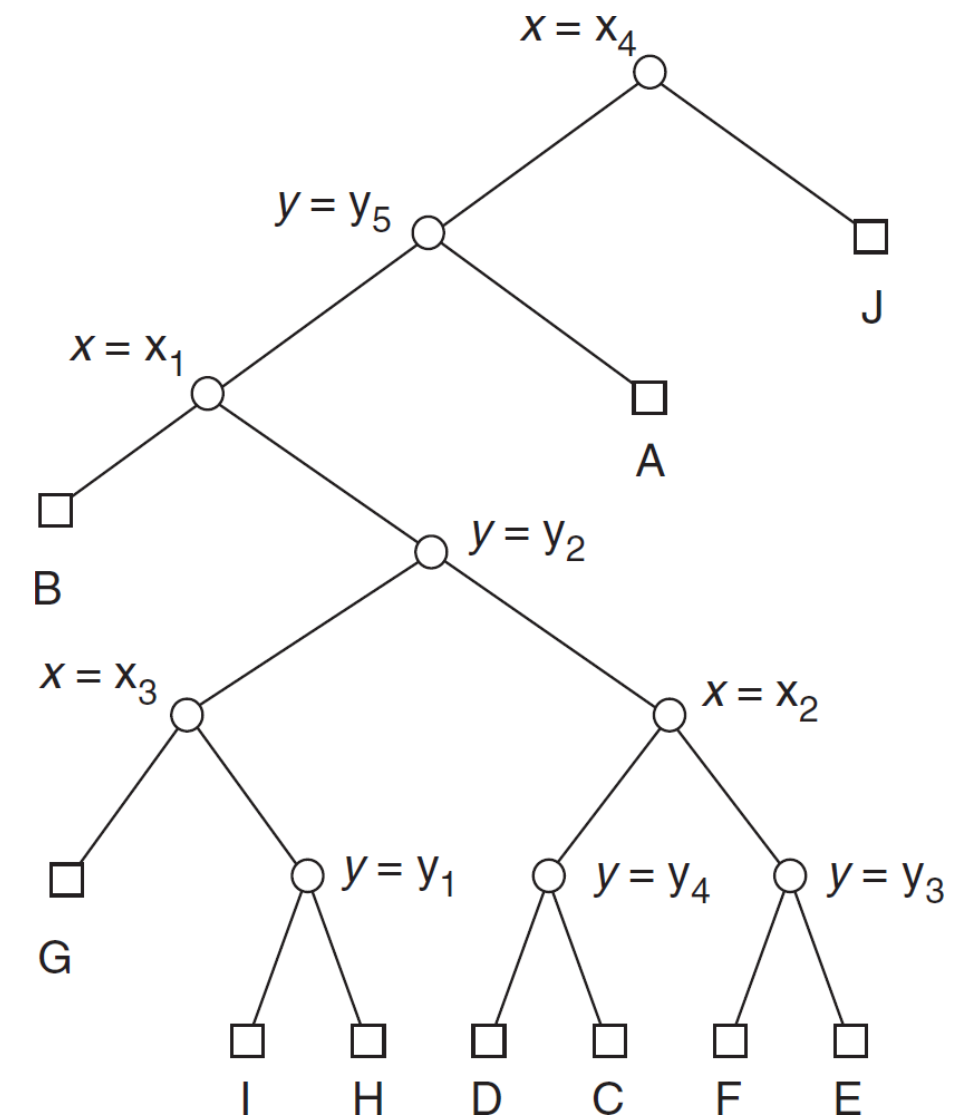
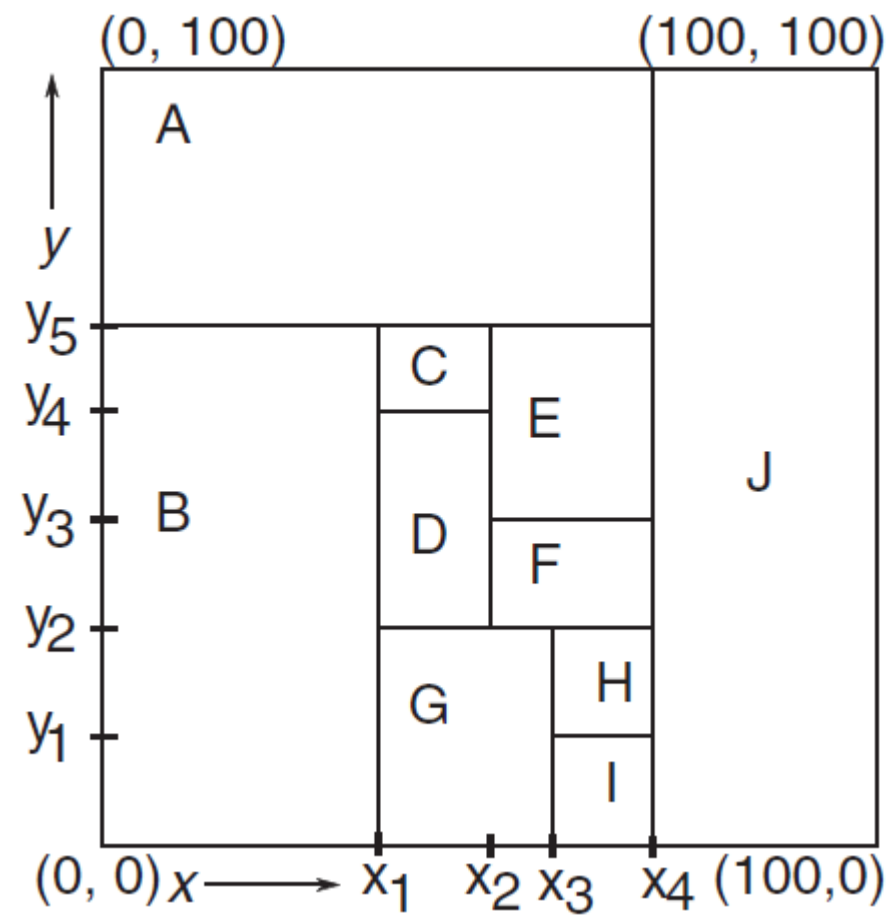
3. hB Tree

hB Tree

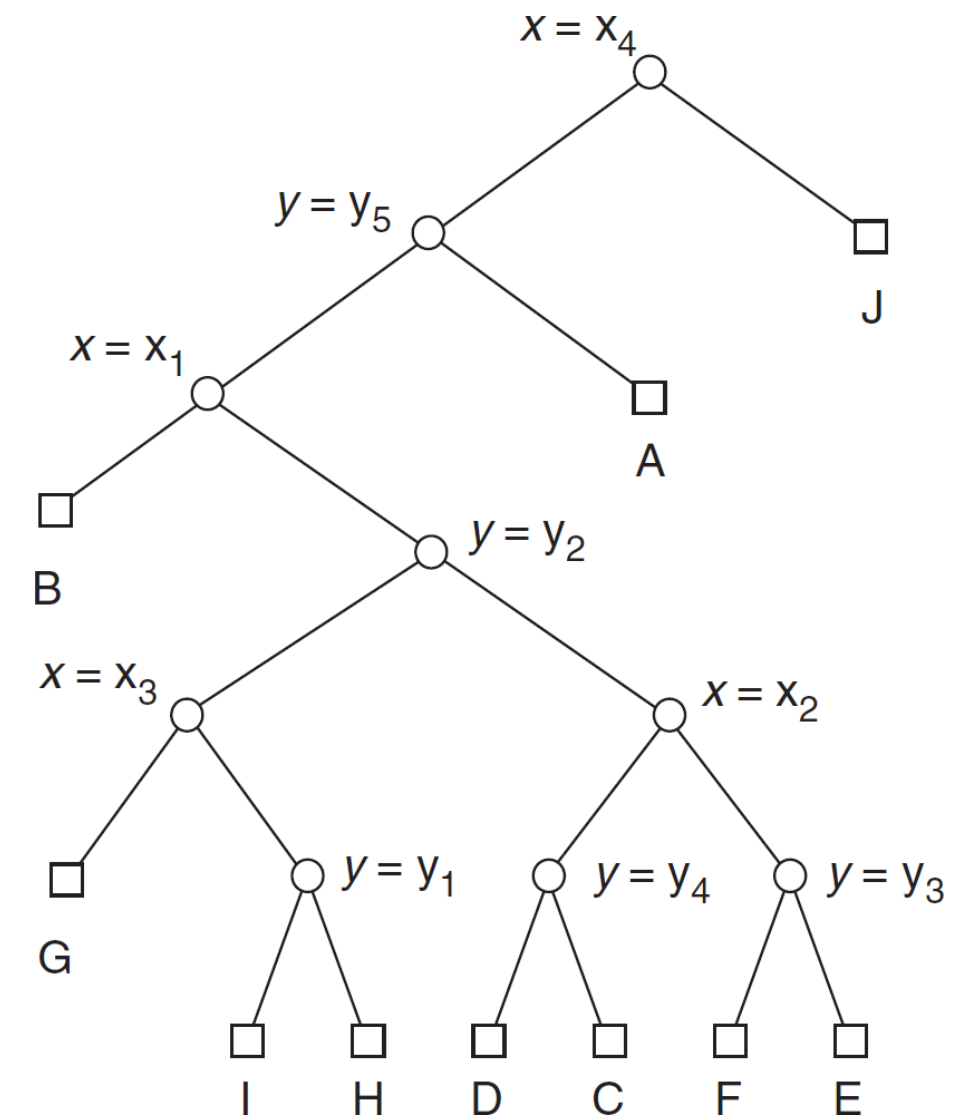
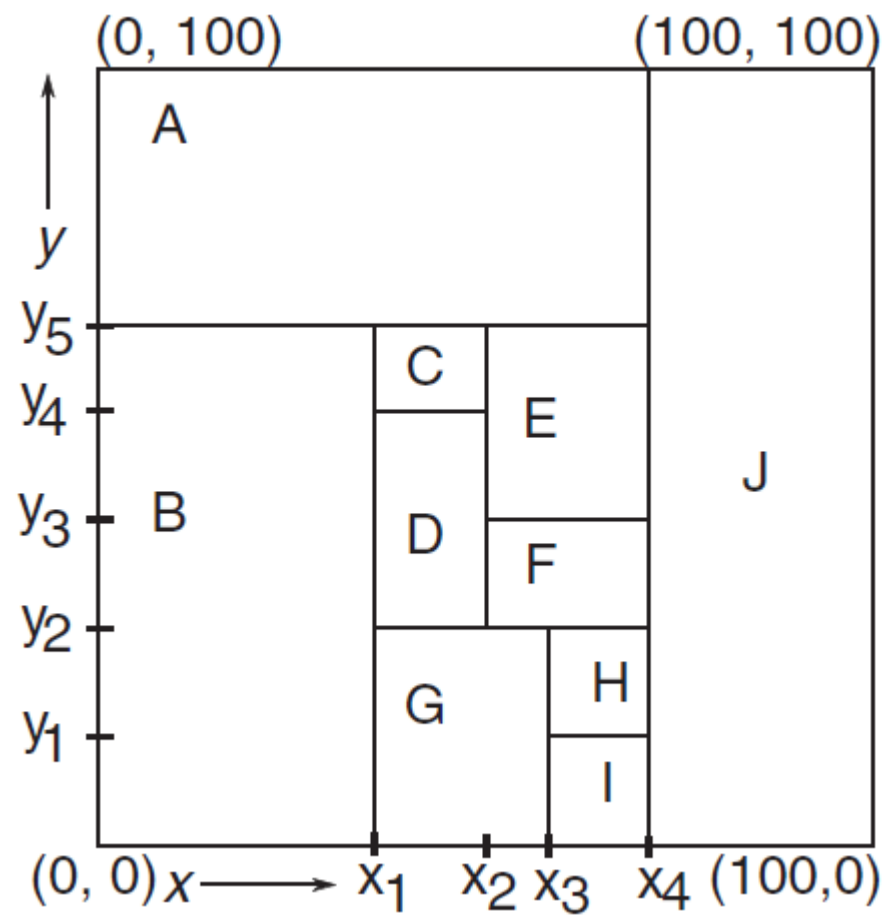
(Holey brick tree)



hB Tree

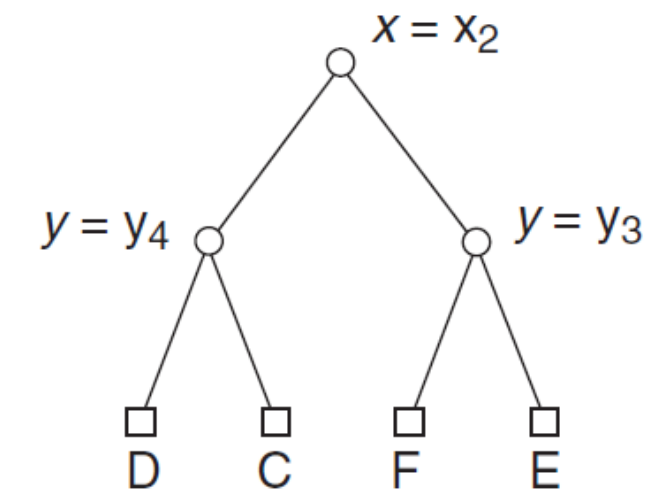
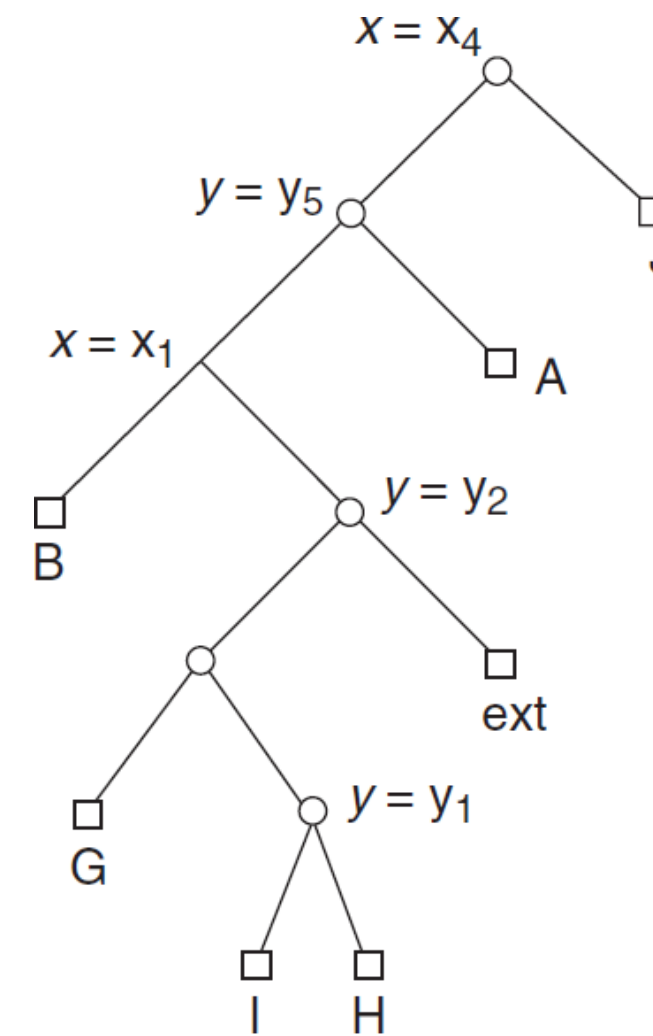
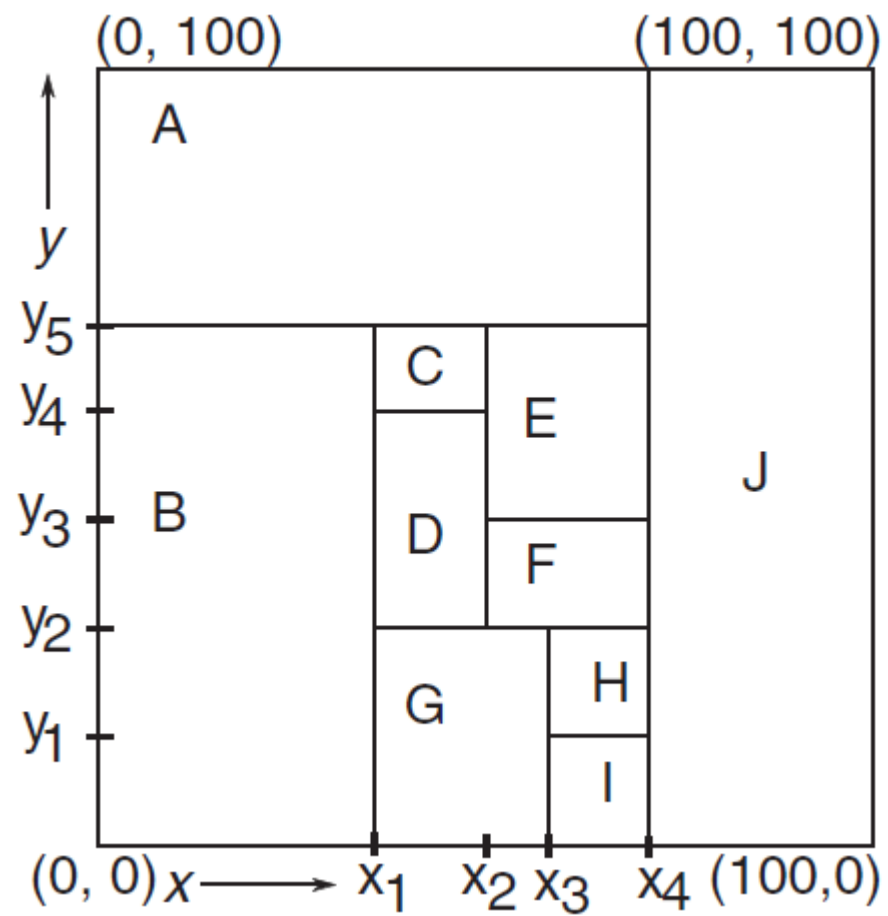


hB Tree



Recorremos el árbol descendiendo por el subárbol con el mayor número de nodos de hoja, hasta obtener un tercio y dos tercios del número total de regiones de la página de regiones desbordadas

hB Tree





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