

Binomial Heap: Decrease Key(H)

Delete (H)

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Void decreaseKeyBin (Node \* H, int old\_val,  
int new\_val)

{  
// 1. Check element is present or not  
// 2. Return if node is not present  
// 3. Reduce value to minimum  
// 4. update the heap according  
// to the reduced value.

Node \* node = find Node (H, old\_val);  
if (node == NULL)  
return;

node->val = new\_val;  
node->parent = node->parent;

while (parent != NULL && node->val  
< parent->val)

{ swap (node->val, parent->val);  
node = parent;  
parent = parent->parent;

// Function Delete an Element from BHeap

Node\* binDelete (Node\* h, int val) {

// 1. Check if heap is empty or not  
// 2. Reduce value to minimum  
// 3. Delete min element from BHeap

if (h == NULL)

return NULL;

decreaseKey Bino(h->val, INT\_MIN);

return extractMin(h);

}

// Function Find Node

Node\* FindNode (Node\* h, int val) {

if (h == NULL)

return NULL;

if (h->val == val)

return h;

Node\* res = findNode(h->child, val);

if (res != NULL) return res;

return findNode(h->sibling, val);