

Implement following functions on Binomial heap

1. delete(H)

2. decreaseKey(H)

void decreaseKeyBHeap(Node *H, int old_val, int new_val)

```
{
    Node *node = findNode(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;
    }
}
```

Node *binomialHeapDelete(Node *h, int val)

```
{
    if (h == NULL)
        return Nil;
    decreaseKeyBHeap(h, val, INT_MIN);
    return extractMinBHeap(h);
}
```

void *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);
}
```

Page 8
18M19CS40