

ADS Lab-10 Writeup (Binomial Heaps - 2)

```
struct node {
```

```
    int data, degree;
```

```
    node *child, *sibling, *parent;
```

```
};
```

```
node *findNode (node *h, int keyval) {
```

```
    if (h == NULL)
```

```
        return NULL;
```

```
    if (h->key == key)
```

```
        return h;
```

```
    node *res = findNode (h->child, key);
```

```
    if (res != NULL)
```

```
        return res;
```

```
    return findNode (h->sibling, key);
```

```
}
```

```
void decreaseKey (node *h, int old_data, new_data)
```

```
node *n = findNode (h, old_data);
```

```
if (node == NULL)
```

```
    return;
```

```
node -> data = new_data;
```

```
node *parent = node -> parent;
```

```
while (parent != NULL && n->data < parent->data) {
```

```
    swap (n->data, parent->data);
```

```
    n = parent;
```

```
    parent = parent->parent;
```

```
}
```

```
}
```

```
node *deleteKey (node *h, int key) {  
    if (h == NULL)  
        return NULL;  
    decreaseKey(h, key, INT_MIN);  
    return extractMin(h);  
}
```