

Batch-2 ADS LAB Pragnav Patil W  
IBM17C3062

- 10) Delete (H) & decrease (H) function on binomial heap  
// decrease key (H) Function

```
void decrease BHeap (Node *H, int new_val)
{
```

```
    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 to delete an element

```
Node * binomial heap delete (Node *H, int val)
```

```
{
```

```
    if (H == NULL)
```

```
        return NULL;
```

```
    decrease key Heap (H, val Int-MIN);
```

```
    return extract min BHeap (H);
```

```
}
```

```
// Function Find Node
Node * findNode (Node *n, intVal)
{
    if (n == NULL)
        return NULL;
    if (n->val == val) return n;
    Node *res = findNode (n->child, val);
    if (res != NULL)
        return res;
    return findNode (n->sibling, val);
}
```