Name: Rudramuni G.M
USN: 1BM18CS085
Sub: ADS

Bafna Gold
Date: Page:

Lab 11:

Delete(H) & Decreasekey(H) Function on Binomial heap.

// Decrease key by new value in Bheap.

```
void decreasekeyBino(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 reduced value.
  // value
node *node = findnode(H, old, val);
  if(node == NULL)
    return;
  node->val = new_val;
Node *Parent = node->Parent;
while(Parent != NULL && node->val < Parat->val)
{ swap(node->val, Parent->val);
    node = Parent;
    Parent = Parent -> Parent;
}}
```

Function to delete an element from Bheap.

```
Node * binodelete(node *h, int value) {
  1. Check if heap is empty or not.
  2. Reduce value to minimum
  3. Delete mini. element from Bheap.
    if(h == NULL)
      return NULL;
    decreaseKeyBino(h, val, Int_Min);
    return extractmin(h);
}
```


Rudra

Name: Rudraprasad G.M
USN: 1BM18CS085

// Function to 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);
}
```

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Rudra