

Lab prgm 10).

Write a program to implement following functions on Binomial Heap:

(i) delete (H):

(ii) decreasekey (H)

```

(ii)
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;
    }
}

```

(i) delete (H)

```

Node *binomialHeapDelete(Node *h, int val)
{
    if (h == NULL)
        return NULL;
}

```

```

decreaseKeyBHeap(h, val, INT_MIN);
return extractMinBHeap(h);
}

```

```

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);
}

```

```

int binomialLink (Node *h1, Node *h2)
{
    h1->parent = h2;
    h1->sibling = h2->child;
    h2->child = h1;
    h2->degree = h2->degree + 1;
}

```