

LAB -10

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```
Node  
{  
    int data, degree  
    Node* child, sibling, parent;  
};
```

merge (Node n_1 , n_2)

if $n_1 \rightarrow \text{data} > n_2 \rightarrow \text{data}$.

swap (n_1, n_2)

$n_2 \rightarrow \text{parent} = n_1$

$n_2 \rightarrow \text{sibling} \Rightarrow n_1 \rightarrow \text{child}$

$n_1 \rightarrow \text{child} = n_2$

$n_1 \rightarrow \text{degree}++$;

union (list $<> L_1$, list $<> L_2$)

// create a new heap.

while (iterator = L_1 .end & iterator = L_2 .end)

if $D(L_1) \leq D(L_2)$

// push the value of iterator. L_1

else.

// push the value of iterator. L_2

// Then push rest of the elements.

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adjust (list \leftrightarrow heap)

if heap.size ≤ 1
return.

if size == 2

it2 = it1

it2 ++;

it3 = heap.end().

while (it1 \rightarrow x end)

if it2 == heap.end()

it1 ++;

else if (*it1 \rightarrow degree $<$ *it2 \rightarrow degree)

it1 ++

it2 ++

if (it3 != heap.end())

it3 ++

~~else if~~

return heap.